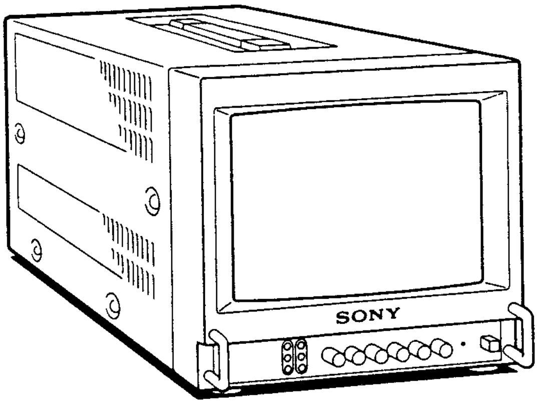
PVM-9043MD

SERVICE MANUAL

AEP Model

Chassis No. SCC-F09F-A



SPECIFICATIONS

Video signal

Color system	PAL, NTSC$_{3.58}$, NTSC$_{4.43}$
Resolution	450 TV lines
Aperture correction	–4.0 dB – +6.0 dB (at 3.0 MHz)
Frequency response	6.0 MHz (–3.0 dB) at all inputs
Synchronization	AFC time constant 1.0 msec.

Picture performance

Normal scan	3% over scan of CRT effective screen area
H. linearity	Less than 7.0% (typical)
V. linearity	Less than 7.0% (typical)
Convergence	Central area: 0.43 mm (typical) Peripheral area: 0.53 mm (typical)
Raster size stability	H: 1.0%, V: 1.5%
High voltage regulation	3.0%
Color temperature	D65

Inputs and Outputs

Inputs	Y/C IN: 4-pin mini DIN connector (See the pin assignment.) VIDEO IN: BNC connector 1Vp-p ± 6 dB, sync negative AUDIO IN: phono jack, –5 dBs, less than 47 kohms
Loop-through outputs	Y/C OUT: 4-pin mini DIN connector VIDEO OUT: BNC connector, 75 ohms terminated AUDIO OUT: phono jack Output level 0.5 W

— Continued on next page —

TRINITRON® COLOR VIDEO MONITOR

SONY®

MICROFILM

General

Mode of operation ;	Continuous.
Classification	Protection Class 1, Group 3, Type B Not suitable for use in the presence or a flammable anaesthetic mixture with air, oxygen or nitrous oxide.
Power consumption	43 W (0.7 – 0.4A)
Power requirements	100 – 240 V AC, 50/60 Hz
Operating temperature range	0 – 35°C
Storage temperature range	–10 – +40°C
Humidity	0 – 90%
Pressure	880 – 1060 hpa
Dimensions	Approx. 217 × 217 × 352.5 mm (w/h/d) ($8\frac{5}{8}$ × $8\frac{5}{8}$ × 14 inches) not incl. projecting parts and controls
Mass	Approx. 7.8 kg (17 lb 3 oz) not incl. battery packs
Accessories supplied	AC power cord (1) Splash proof cover (2) Control panel cover (1)

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Dangerously high voltages are present inside the unit. Do not open the cabinet. Refer servicing to qualified personnel only.

In the event of a malfunction or when maintenance is necessary, consult an authorized Sony dealer.

FOR CUSTOMERS IN THE UNITED KINGDOM

WARNING
THIS APPARATUS MUST BE EARTHED

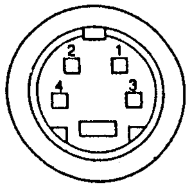
IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow	Earth
Blue	Neutral
Brown	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:
The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow. The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Pin Assignment

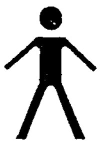
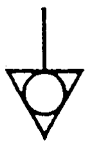
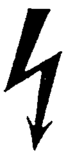
Y/C IN connector (4-pin mini DIN)



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA sub-carrier-input	300 mVp-p, burst Delay time between Y and C: within 0±100 nsec., 75 ohms
3	GND for Y-input	GND
4	GND for CHROMA-input	GND

Design and specifications are subject to change without notice.

Symbols on the unit

Symbol	Location	This symbol indicates
	Rear panel	Type B equipment classified in accordance with IEC Publication 601-1 Safety of medical electrical equipment. Type B equipment is, for example, suitable for external and internal application to the patient, excluding direct cardiac application.
	Rear panel	The equipotential terminal which brings the various parts of a system to the same potential.
	Inside the unit	Presence of uninsulated "dangerous voltage" within the product's enclosure that may be sufficient to constitute a risk of electric shock.

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(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

SECTION 1
GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remein as in the manual.

Features

Three color systems available

The monitor can display PAL, NTSC3.58 and NTSC4.43* signals. The appropriate color system is selected automatically.

* A signal of NTSC4.43 is used for playing back NTSC recorded video cassettes with a video tape recorder/player especially designed for use with this system.

Fine Pitch Trinitron picture tube

The Super Fine Pitch Trinitron picture tube provides a high resolution picture. Horizontal resolution is more than 450 TV lines at the center of the picture.

Y/C input connector

The video signal, split into the chrominance signal (C) and the luminance signal (Y), can be input through this connector, eliminating the interference between the two signals, which tends to occur in a composite video signal, assuring video quality.

Beam current feedback circuit

The built-in beam current feedback circuit assures stable white balance.

Comb filter

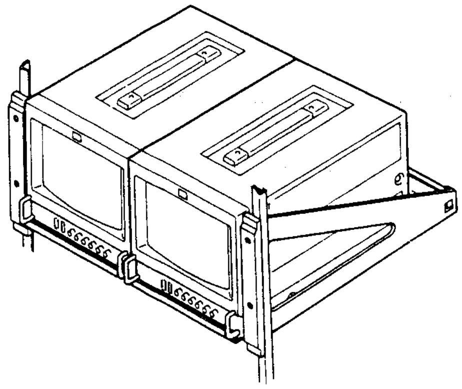
When NTSC video signals are received, a comb filter activates to increase the resolution, resulting in fine picture detail without color spill or color noise.

Automatic termination

The Y/C and VIDEO IN connectors are terminated at 75 ohms inside, when no cable is connected to the loop-through output connectors. When a cable is connected to an output connector, the 75-ohm termination is automatically released.

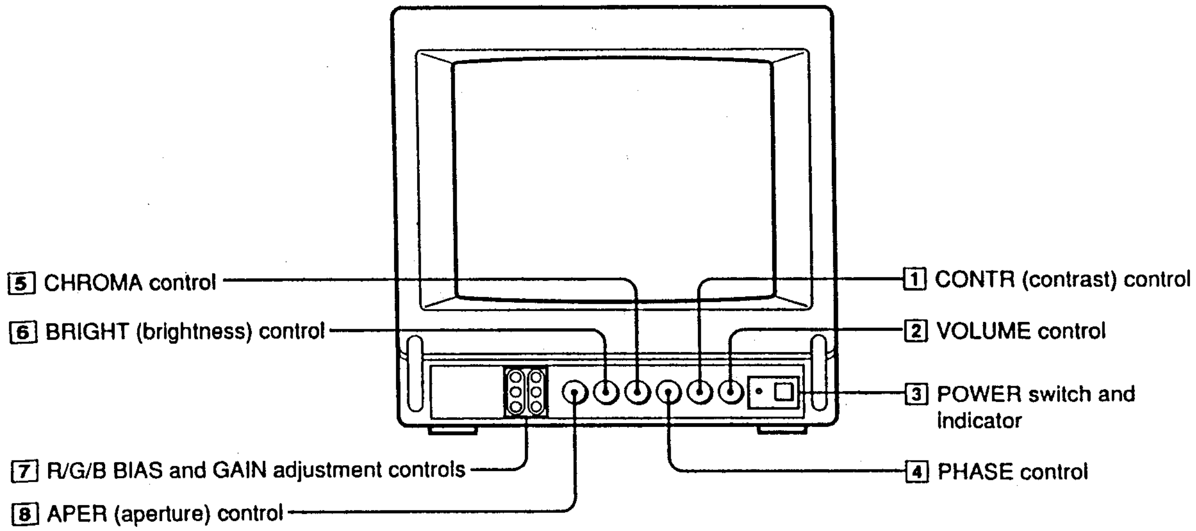
EIA standard 19-inch rack mounting

By using an MB-507 mounting bracket (not supplied), the monitor can be mounted in an EIA standard 19-inch rack. For details on mounting, see the instruction manual of the MB-507.



Location and Function of Parts and Controls

Front


5 CHROMA control
6 BRIGHT (brightness) control
7 R/G/B BIAS and GAIN adjustment controls
8 APER (aperture) control
1 CONTR (contrast) control
2 VOLUME control
3 POWER switch and indicator
4 PHASE control

1 CONTR (contrast) control
Turn clockwise to make the contrast stronger and counterclockwise to make it weaker.

2 VOLUME control
Turn this control clockwise or counterclockwise to obtain the desired volume.

3 POWER switch and indicator
Depress to turn the monitor on. The indicator will light up in green.

4 PHASE control
This control is effective only for the NTSC$_{3.58}$ and NTSC$_{4.43}$ color systems. Turn clockwise to make the skin tones greenish and counterclockwise to make them purplish.

5 CHROMA control
Turn clockwise to make the color intensity stronger and counterclockwise to make it weaker.

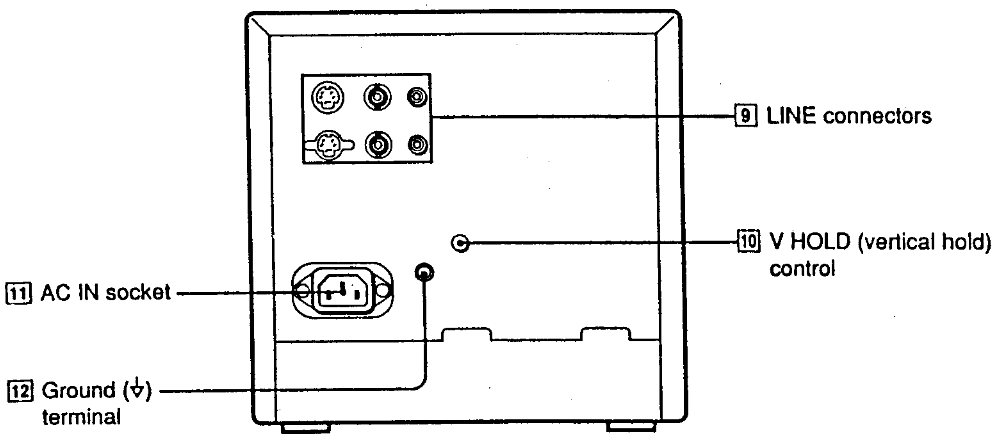
6 BRIGHT (brightness) control
Turn clockwise for more brightness and counterclockwise for less.

7 R/G/B BIAS and GAIN adjustment controls
Used for white balance fine adjustment.
BIAS and GAIN controls are provided for the R (red), G (green) and B (blue) screens.

BIAS: Adjust the white balance and brightness of the screen at the lowlight.
GAIN: Adjust the white balance and brightness of the screen at the highlight.

8 APER (aperture) control
Turn clockwise for more sharpness and counterclockwise for less.

Rear



9 LINE connectors

Y/C IN (4-pin mini DIN): Connect to the Y/C separate output of a video camera, VCR or other video equipment.

Y/C OUT (4-pin mini DIN): Loop-through output of the Y/C IN connector. Connect to the Y/C separate input of a VCR or another monitor.

VIDEO IN (BNC): Connect to the video output of a video camera, VCR or other video equipment.

VIDEO OUT (BNC): Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

AUDIO IN (phono jack): Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).

AUDIO OUT (phono jack): Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

Note

The Y/C IN connector has a priority over the VIDEO IN connector.
When a plug is connected to the Y/C IN connector, the VIDEO IN connector is automatically disconnected.

10 V HOLD (vertical hold) control

Turn to stabilize the picture if it rolls vertically.

11 AC IN socket

Connect the supplied AC power cord to this socket and to a wall outlet.

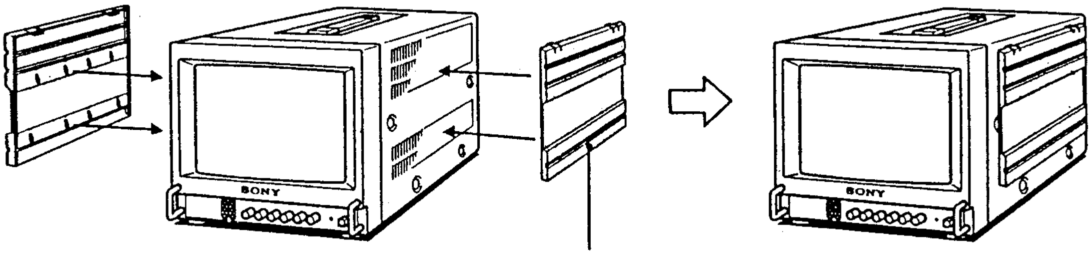
12 Ground (⏚) terminal

Connect to the system ground.

Attaching the Splash Proof Cover

In order to protect the ventilation holes from splashes (of medicines, etc.), attach the splash proof covers (supplied) as shown below.

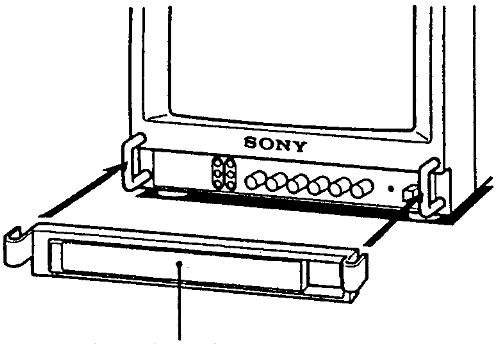
When the cover is attached, the unit complies with the IEC 2nd degree waterproofing standard as indicated by the second numeral of the designation – IEC-529.



Splash proof cover
(supplied)

Attaching the Control Panel Cover

In order to protect the control buttons on the front panel from undesired touching, attach the supplied control panel cover.

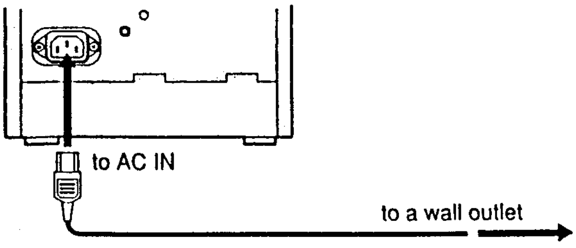


Control panel cover
(supplied)

Power Sources

House Current

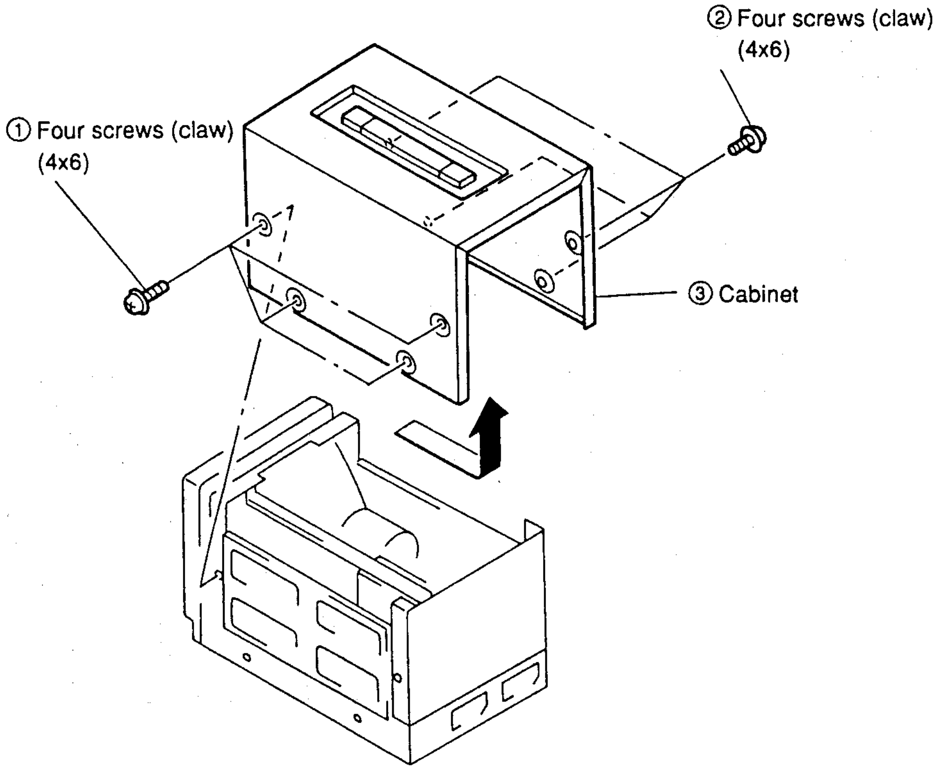
Connect the supplied AC power cord to the AC IN socket and to a wall outlet.



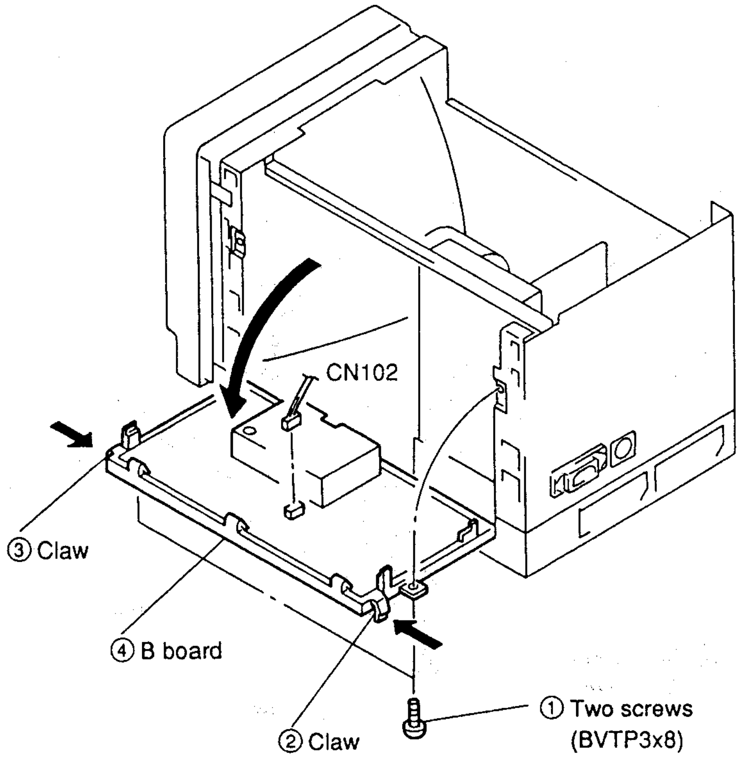
MEMO

SECTION 2
DISASSEMBLY

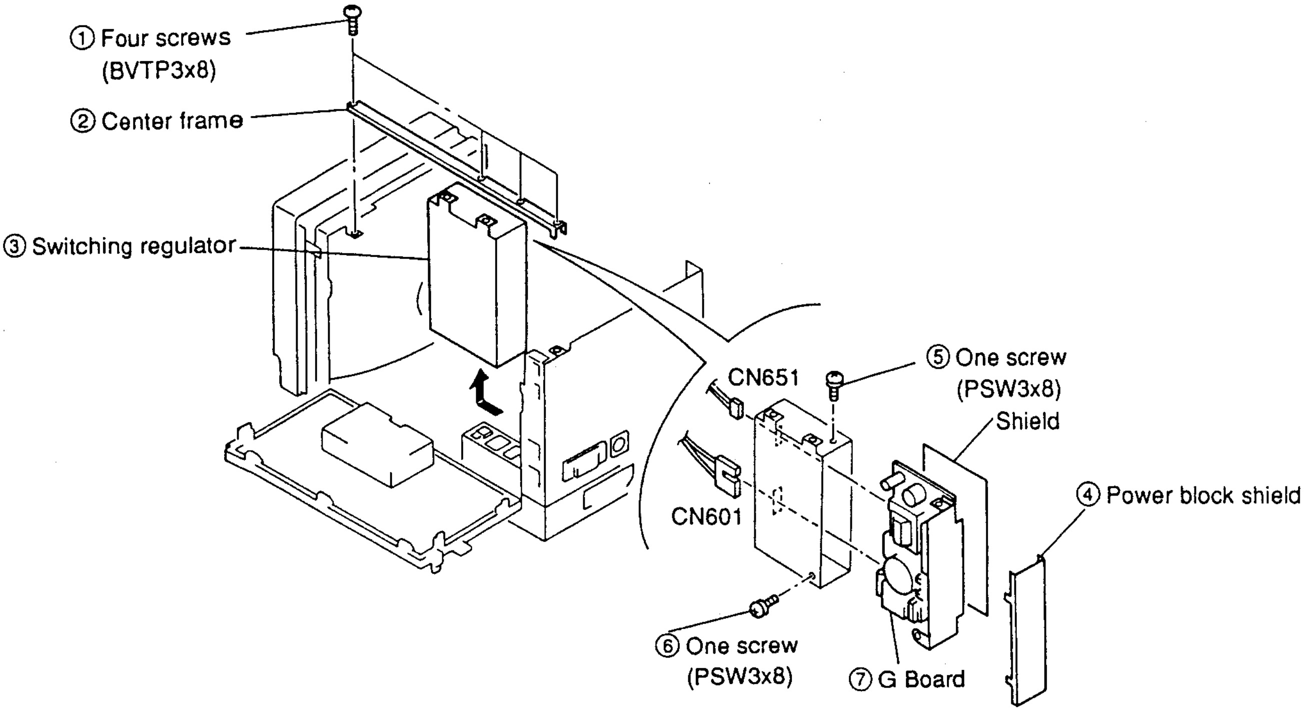
2-1. CABINET REMOVAL


② Four screws (claw)
(4x6)
① Four screws (claw)
(4x6)
③ Cabinet

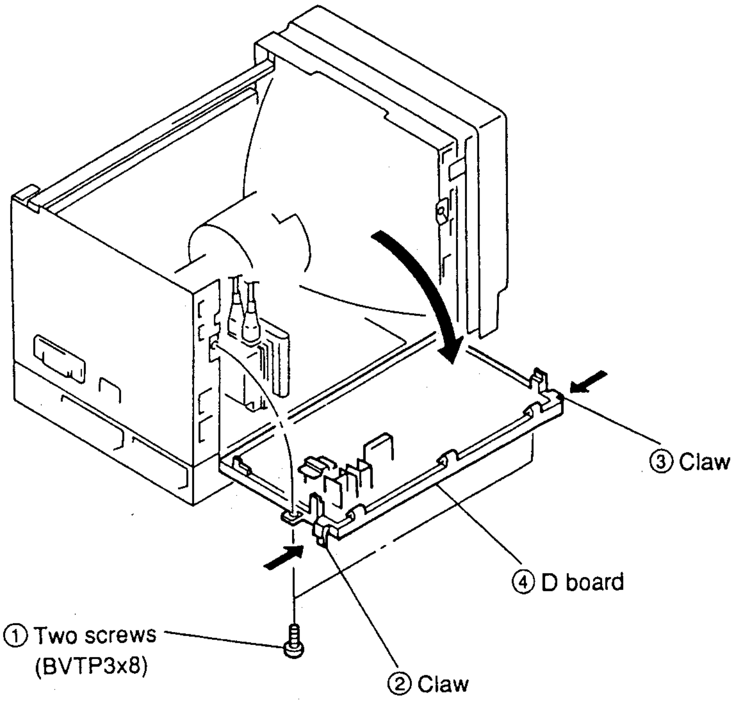
2-2. B BOARD REMOVAL


CN102
③ Claw
④ B board
② Claw
① Two screws
(BVTP3x8)

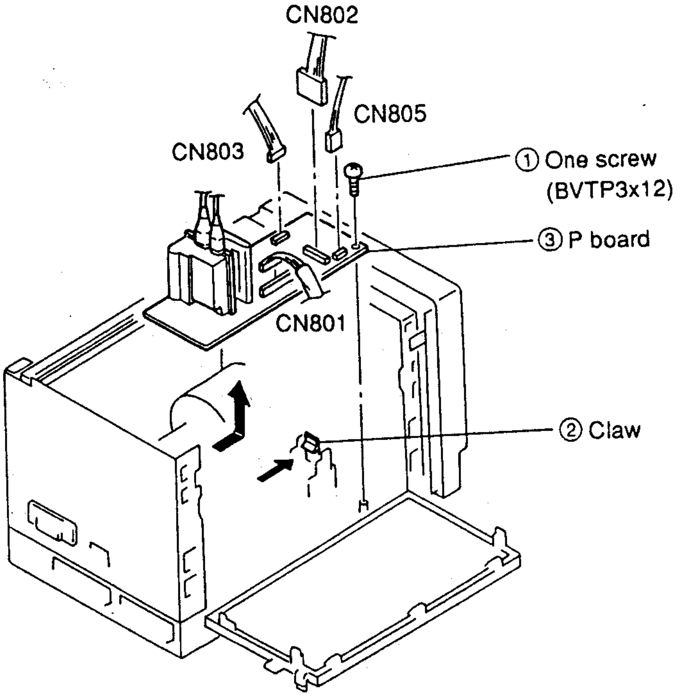
2-3. SWITCHING REGULATOR REMOVAL


① Four screws
(BVTP3x8)
② Center frame
③ Switching regulator
CN651
⑤ One screw
(PSW3x8)
Shield
④ Power block shield
CN601
⑥ One screw
(PSW3x8)
⑦ G Board

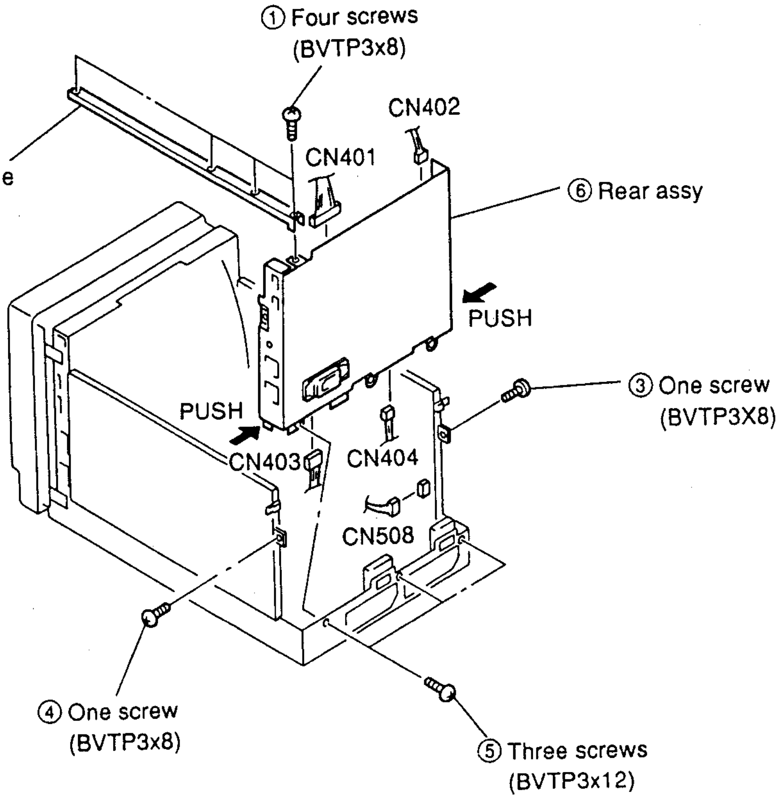
2-4. D BOARD REMOVAL


③ Claw
④ D board
① Two screws
(BVTP3x8)
② Claw

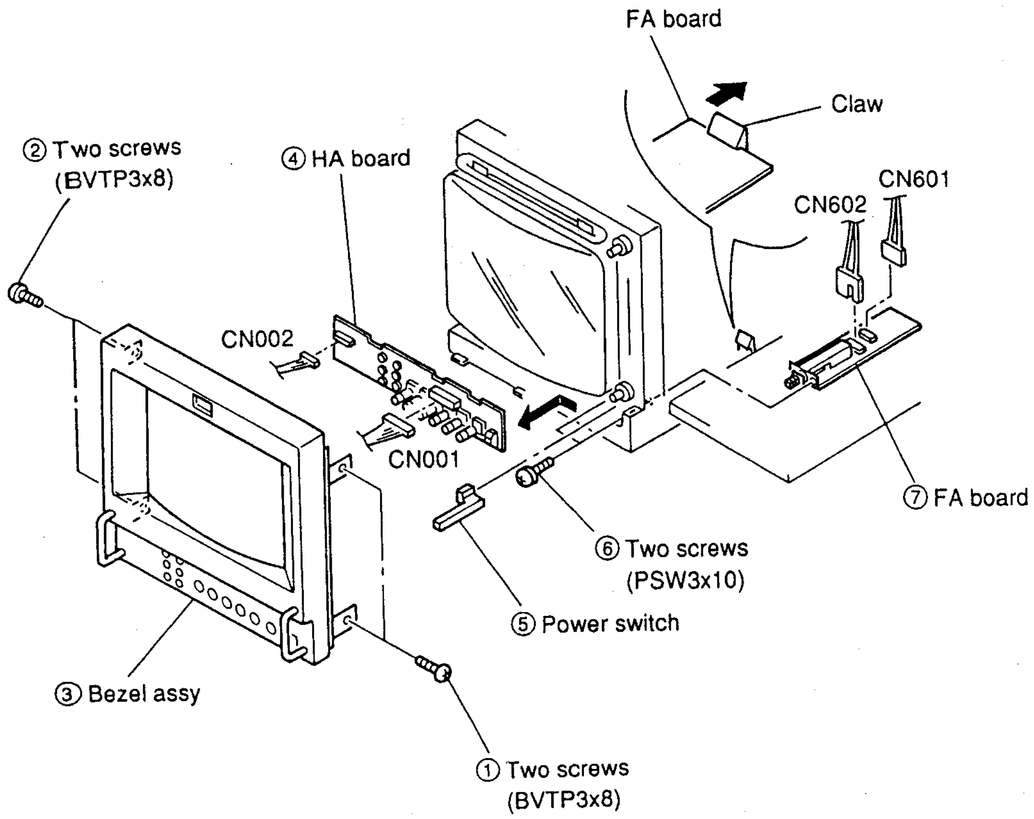
2-5. P BOARD REMOVAL


CN802
CN805
CN803
① One screw
(BVTP3x12)
③ P board
CN801
② Claw

2-6. REAR ASSY REMOVAL


① Four screws
(BVTP3x8)
CN402
CN401
② Center frame
⑥ Rear assy
PUSH
③ One screw
(BVTP3X8)
PUSH
CN403
CN404
CN508
④ One screw
(BVTP3x8)
⑤ Three screws
(BVTP3x12)

2-7. HA AND FA BOARDS REMOVAL


FA board
Claw
CN601
CN602
② Two screws
(BVTP3x8)
④ HA board
CN002
CN001
⑦ FA board
⑥ Two screws
(PSW3x10)
⑤ Power switch
③ Bezel assy
① Two screws
(BVTP3x8)

2-8. PICTURE TUBE REMOVAL

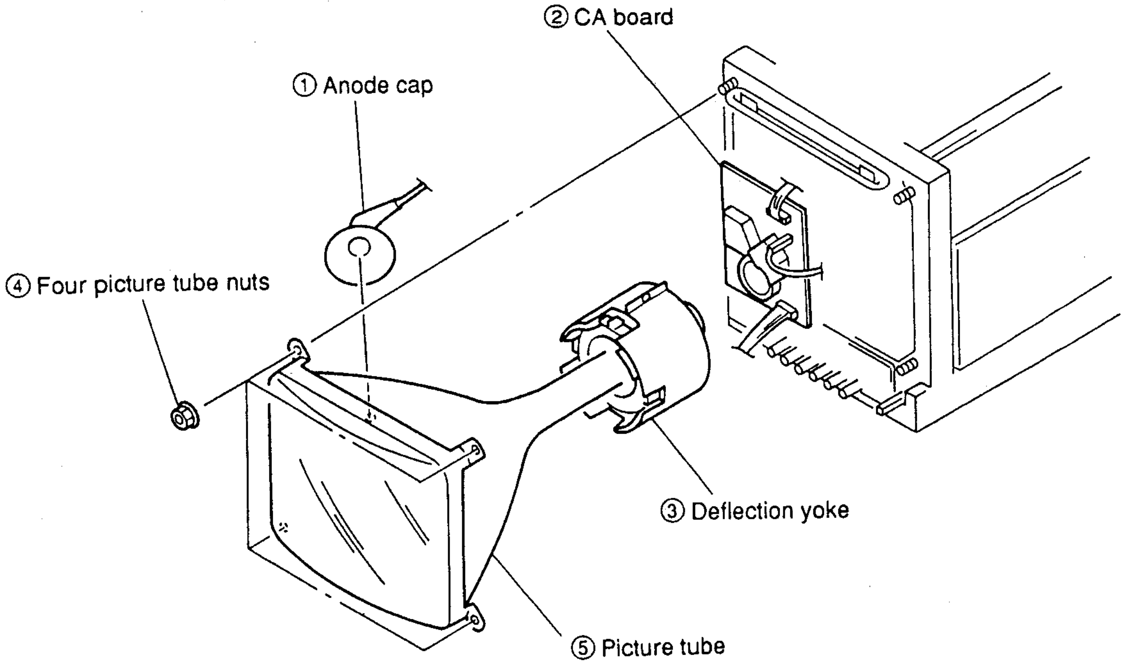
Note : Caution for ANODE CAP installation.
When you replace PICTURE TUBE or FBT, remove RTV on ANODE CAP so that PICTURE TUBE and FBT can be separated. Please adhere picture tube and anode cap in accordance with the following procedure.

ADHERING PROCEDURE OF ANODE CAP.

1. Clean PICTURE TUBE ANODE CAP with ethnaol to remove original RTV.
2. Dry clean face with air.
3. Use KE-490RTV (RTV silicone adhesive, SHIN-ETSU CHEMICAL).

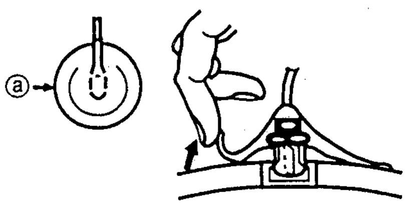
Part. No.	Description
7-322-065-19	Silicone (RTV) KE-490W

4. Install ANODE CAP.
5. Adeguately apply RTV to the entire picture tube anode area, piace the anode cap onto the picture tube and push it down securety so that no air pockets remain beneath the cap.
6. Dry more than 12 hours at room temperature.

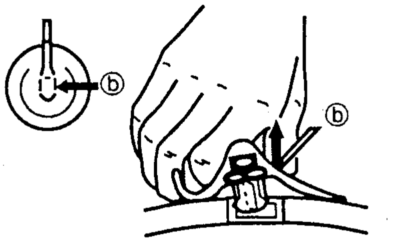


• REMOVAL OF ANODE-CAP

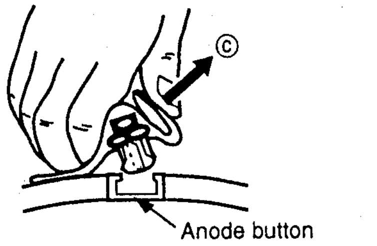
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



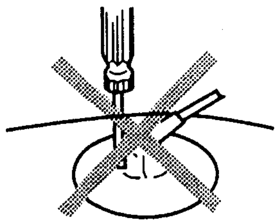
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

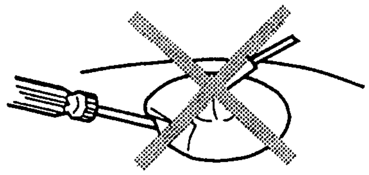
• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

② Don't press the rubber hardly not to hurt inside of anode-caps!
A metal fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly!





SECTION 3
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

The control and switch below should be set as follows unless otherwise noted:

CONTRAST control 80%
BRIGHTNESS control 50%

Perform the adjustments in order as follows:
3-1. Beam Landing
3-2. Convergence
3-3. Focus
3-4. White Balance

Note: Test equipment Required.
1. Color Bar/Pattern Generator
2. Degausser
3. Color Analyzer (Minolta)
4. Luminance Level Meter

3-1. BEAM LANDING

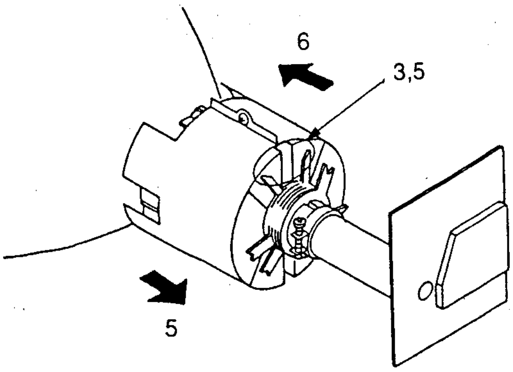
Precaution

1. Set the side of the unit with the PICTURE TUBE so that it faces east or west in order to reduce the influence of external magnetic force.
2. Turn the power switch for the unit ON and erase the magnetic force using a degausser.

(1) Beam Landing

1. Receive an entirely white signal with the pattern generator.
   CONTRAST ....:............................... MAX.
   BRIGHTNESS .... set easy to observe
2. Adjust the white balance, G2 voltage and convergence roughly.
3. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Fig.3-1.
4. Switch over the pattern generator to green.
5. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and blue and red are at the sides, evenly. (Fig.3-2)
6. Move the deflection yoke forward, and adjust so that the entire screen becomes green. Repeat 5 to 7 as to red and blue.
7. When landing at the corners is not right, correct by using the magnet. (Fig.3-3)
8. When the position of the deflection yoke is determined, tighten it with a deflection yoke mounting screw.

CAUTION: When correction magnet is used, be sure to degauss the unit.



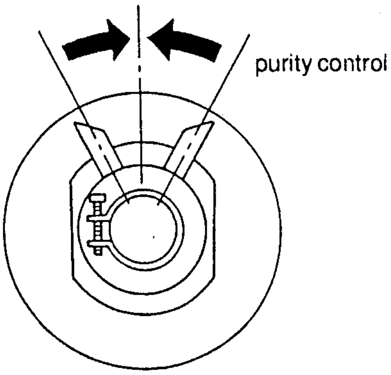


Fig.3-1

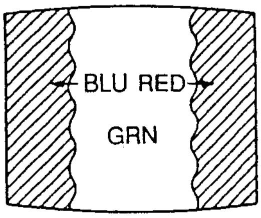
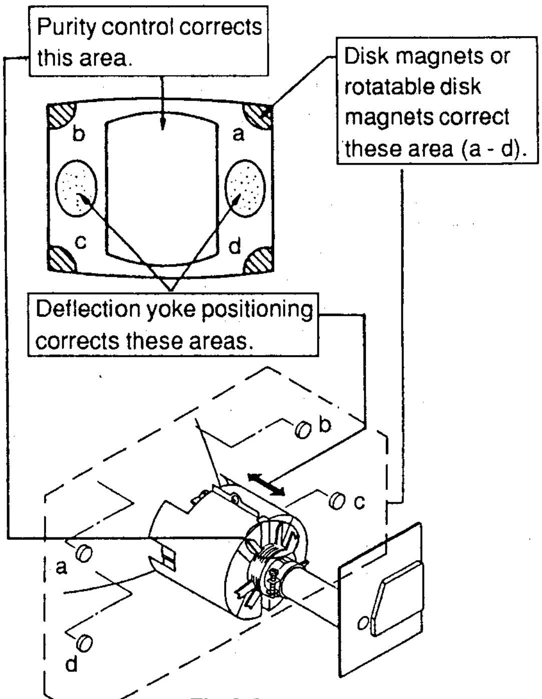


Fig.3-2


Purity control corrects this area.

Disk magnets or rotatable disk magnets correct these area (a - d).

Deflection yoke positioning corrects these areas.

Fig.3-3

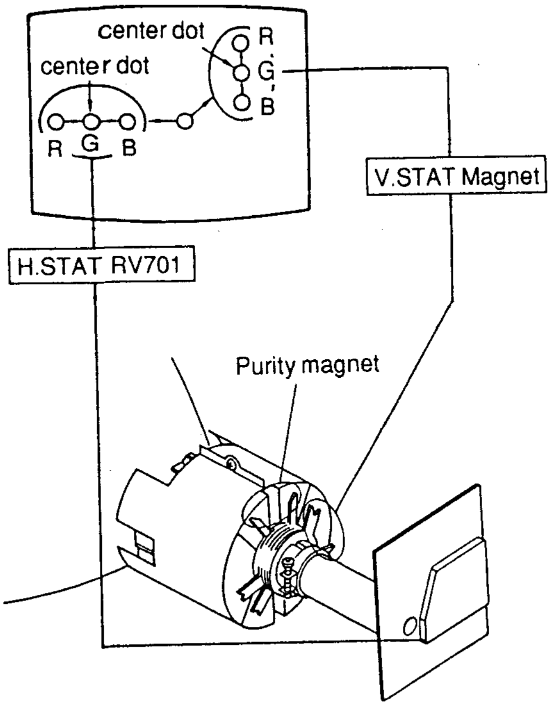
3-2. CONVERGENCE

(1) Horizontal and vertical Static Convergence Adjustment on the Center of Screen.

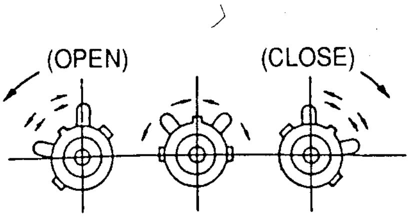
- Before starting, perform V. SIZE, V. CENT, H.SIZE, H.CENT and Screen Distortion Adjustment rightly.

(Static Convergence Adjustment)

1. Receive a dot signal, setting BRIGHTNESS minimum and set CONTRAST to normal.
2. Adjust H.STAT VR to coincide red, green and blue dots on the center of screen. (Horizontal movement)
3. Adjust V.STAT magnet to coincide red, green and blue dots on the center of screen. (Vertical movement)

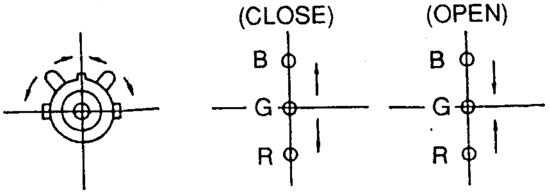

center dot
center dot
R
G
B
R G B
V.STAT Magnet
H.STAT RV701
Purity magnet

* If the red, green and blue dots do not coincide on the center of screen with H.STAT VR, perform adjustment using V.STAT at the same time while tracking.
(Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.)

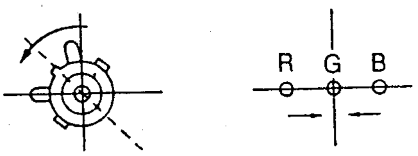


4. When the V.STAT magnet is moved in the direction of arrow A and b, red, green and blue dots move as shown below.

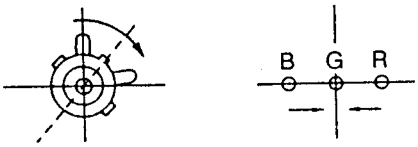
① When moving the V.STAT Magnet open or close.


(CLOSE)
(OPEN)
B
G
R
B
G
R

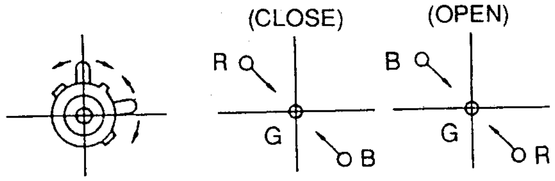
② When moving the V.STAT magnet counterclockwise.



③ When moving the V.STAT magnet clockwise.



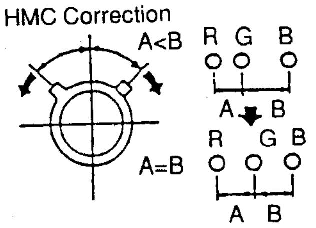
④ When tilt the V.STAT magnet and open or close.

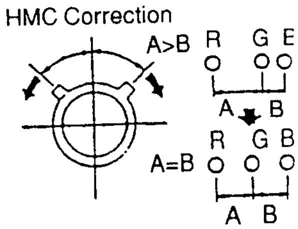

(CLOSE)
(OPEN)
R
G
B
B
G
R

* If the red and green dots do not coincide with blue dot, adjustment with BMC (6-poles) magnet.

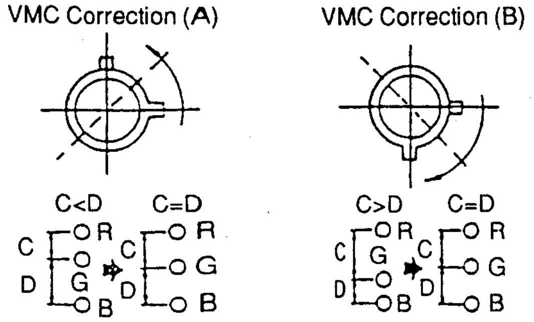
5. HMC and VMC correction for BMC (6-Poles) magnet.

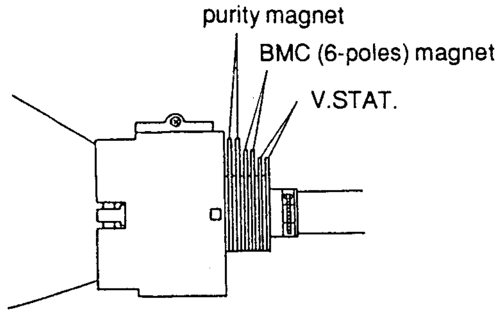
① HMC (Horizontal Misconvergence) correction and motion of the Electron Beam with the BMC (6-poles) magnet.


HMC Correction
A<B
R G B
A B
R G B
A=B
A B


HMC Correction
A>B
R G
A B
R G B
A=B
A B

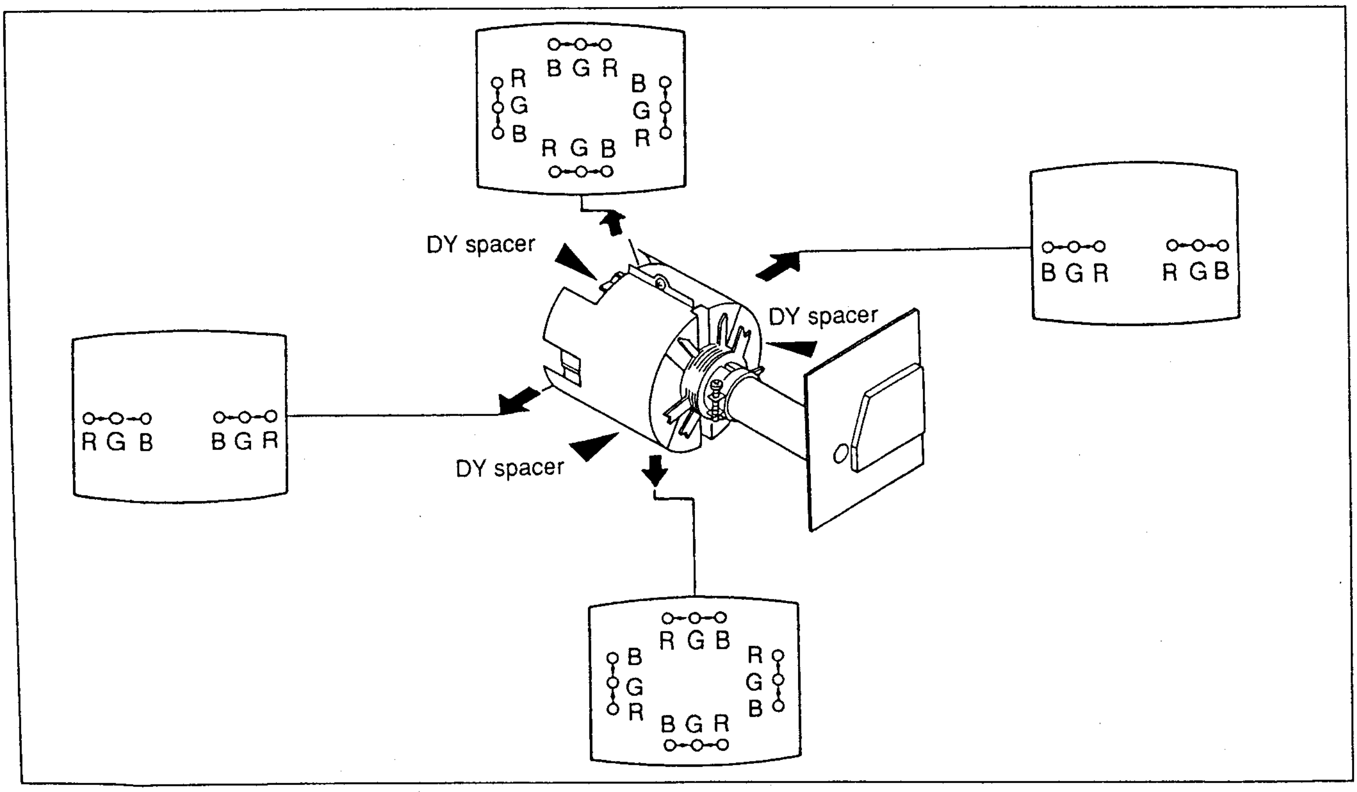
② VMC (Vertical Misconvergence) correction and motion of the Electron Beam with the BMC (6-poles) magnet.


VMC Correction (A)
VMC Correction (B)
C<D
C=D
C>D
C=D
C
D
R
G
B
R
G
B

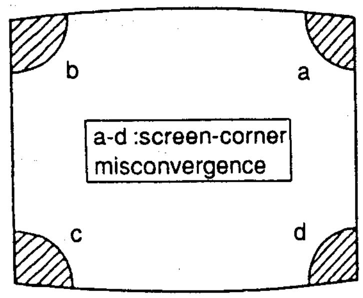

purity magnet
BMC (6-poles) magnet
V.STAT.

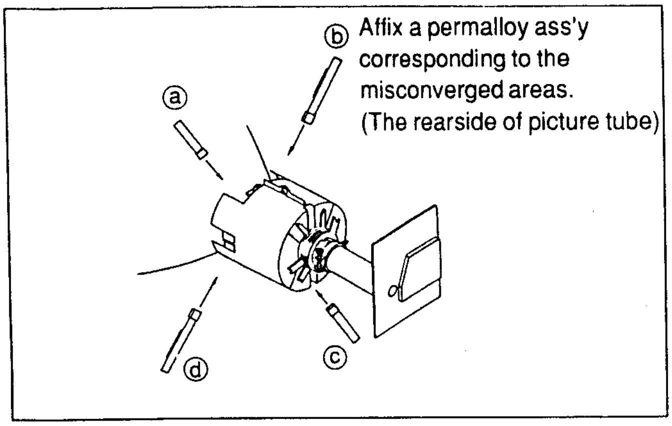
(2) Horizontal and Vertical Dynamic Convergence Adjustment at the Environs of the Screen (Dynamic Convergence Adjustment)

1. When there is misconvergence at the sides of screen, adjust for best convergence as follows by moving the deflection yoke.
2. Loosen deflection yoke screw. Remove deflection yoke spacers. Move the deflection yoke for best convergence. Tighten the deflection yoke screw. Install three deflection yoke spacers.


DY spacer
DY spacer
DY spacer
B G R
R G B
R G B
B G R
B G R
R G B
R G B
B G R
R G B
B G R

Screen-corner Convergence

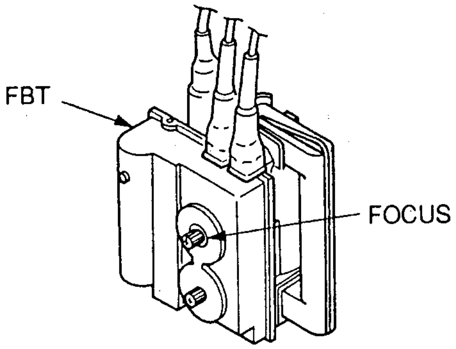




ⓑ Affix a permalloy ass'y corresponding to the misconverged areas. (The rearside of picture tube)

3-3. FOCUS

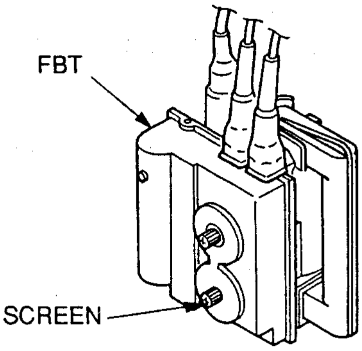
1. Receive the broadcast.
2. CONTRAST → Normal
3. Adjust FOCUS control so that the focus on the center of screen becomes to the best.



3-4. WHITE BALANCE

[Screen (G2) Voltage Adjustment]

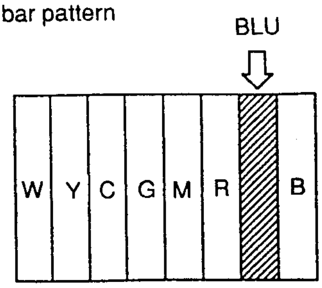
1. Receive a dot signal with the pattern generator.
2. Adjust R. G. B cut-off controls so that respective cathode voltage against ground becomes 103V DC.
3. Observing the screen, adjust SCREEN control so that the background of the dot signal is bright dimly.



[White Balance]

1. Receive a color-bar pattern signal with the pattern generator. (Make black and white screen by chroma switch off.)
2. • BRIGHTNESS 50%
   • CONTRAST .... Minimum
   • CHROMA 50%
   • DRIVE control .... Mechanical center
   • BKG control .... Mechanical center
3. Adjust RV118 (SUB BRT) on B board so that the blue stripe portion on the color-bar pattern signal is bright dimly.

color-bar pattern



4. Receive an entirely white signal from the pattern generator.
5. CONTRAST .... 70% (90 degree clockwise from mechanical center.)
6. Using the luminance level meter, adjust the luminance level of the pattern generator becomes 3 Nits. (The condition the screen is bright dimly.)
7. Adjust white balance at cut-off using RV119 (G-C/O) and RV121 (B-C/0).
8. Change the all-white signal luminance level to 100 IREs.
9. Adjust white balance at high-light using RV120 (G-GAIN) and RV121 (B-GAIN).

SECTION 4
SAFETY RELATED ADJUSTMENTS

4-1. SAFETY RELATED ADJUSTMENTS

B+ ADJUSTMENT AND B+ MAX CONFIRMATION (⊠ RV651)

The following adjustments should always be performed when replacing the following components (marked with ◪ on the schematic diagram).

◪ on G board : (Power supply block)
IC601, IC651, PH601, C654, R653, R655, R656, R657, RV651.

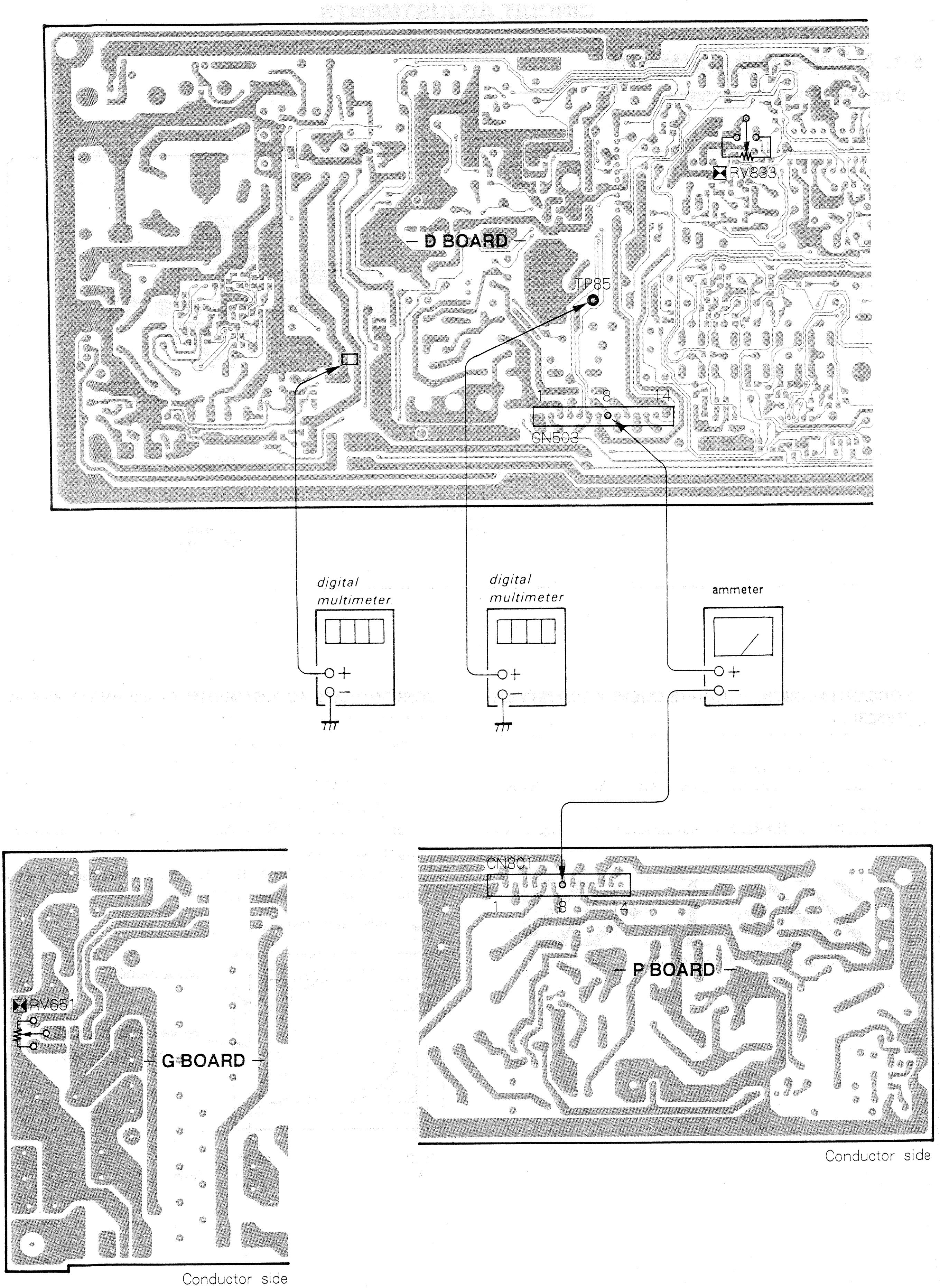
1. Input the AC power supply voltage 240V^{+1}_{-0}V.
2. Input the monoscope signal.
3. Set as follows.
   - CONTRAST 80%
   - BRIGHTNESS 50%
4. Connect the digital multimeter to JR513 on the D board.
5. Adjust RV651 on the G board so that the B+ voltage becomes 40.0 ± 0.1V.
6. After adjusting RV651, fix it with an epoxy.
7. Input the AC power supply voltage 250V^{+1}_{-0} V.
8. Input the dot signal.
9. Set as follows.
   - CONTRAST .... Minimum
   - BRIGHTNESS .... Minimum
10. Check that the B+ voltage is below 41.9V.
    If it is above this value, repeat from step (1).

HOLD-DOWN CIRCUIT CONFIRMATION (⊠ RV833) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (marked with ◪ on the schematic diagram).

◪ on D board:
IC502, Q833, Q834, Q835, Q836, D835, D836, C519, C843, C844, C845, C846, C847, C848, RV833, R523, R850, R851, R852, R853, R854, R855, R856, R857, R858, R859, R861, R862, R863, NL801.
◪ on P board:NL801,T802 (FBT),C814

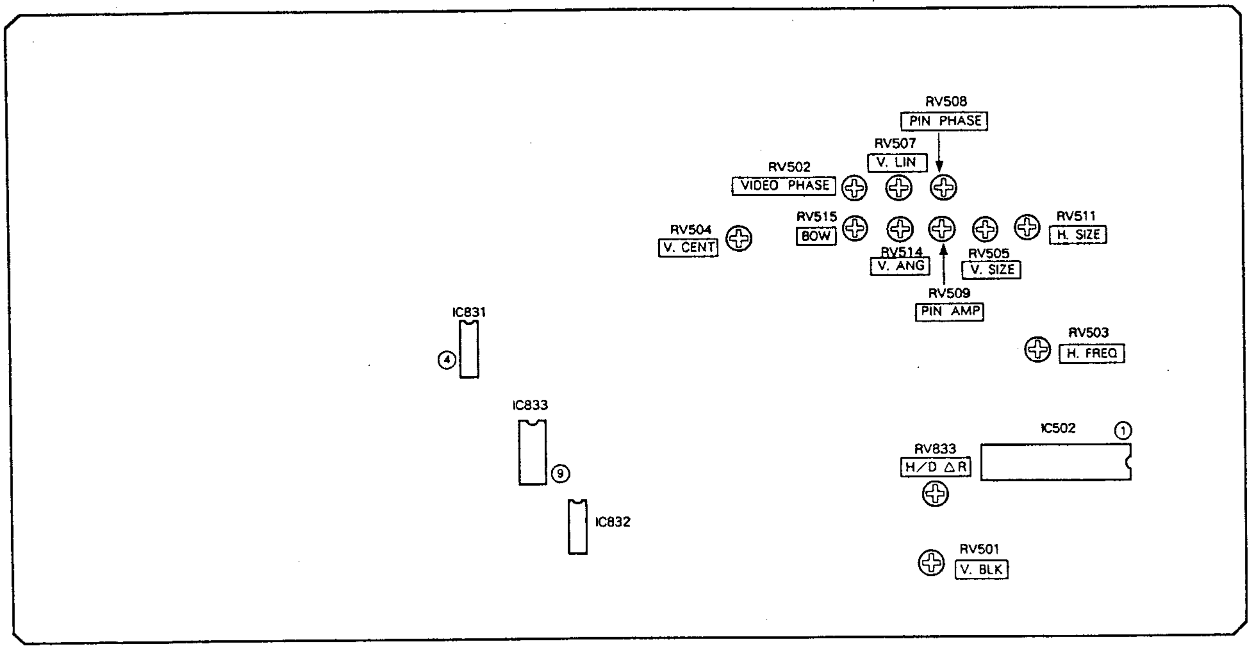
1. Receive an entire white signal.
2. - CONTRAST .... Maximum
   - BRIGHTNESS .... Maximum
3. Connect a digital multimeter to the TP85 (CN503 pin-⑥).
4. Confirm the voltage is 14.1 ± 3.0V DC.
5. Receive a dot signal.
6. Connect an ammeter between D board CN503 pin-⑧ and P board CN801 pin-⑧.
7. Adjust BRIGHTNESS and CONTRAST so that the current is IABL = 160 ± 30 μA.
8. Apply an external DC voltage gradually to TP85. When the voltage becomes 18.5V ± 0.1V DC, confirm the HOLD-DOWN circuit operates immediately and raster disappears.
9. When external DC voltage at TP85 becomes 17.5V ± 0.1V DC, confirm the HOLD-DOWN circuit doesn't operate.
10. Receive an entire white signal.
11. Adjust with BRIGHTNESS and CONTRAST controls so that the current is IABL = 520 ± 30 μA.
12. Apply DC voltage of 17.8V ± 0.1V to TP85. Confirm the HOLD-DOWN circuit operates immediately and raster disappears.
13. With the same set-up as steps 10 and 11, supply 16.8V ± 0.1V DC to TP85. Confirm that the HOLD-DOWN circuit doesn't operate.
14. When above specifications are not satisfied, readjust RV833. After adjusting, fasten RV833 in place with epoxy.


RV833
– D BOARD –
TP85
1
8
14
CN503
digital multimeter
digital multimeter
ammeter
+
−
+
−
+
−
CN801
1
8
14
– P BOARD –
Conductor side
RV651
– G BOARD –
Conductor side

SECTION 5
CIRCUIT ADJUSTMENTS

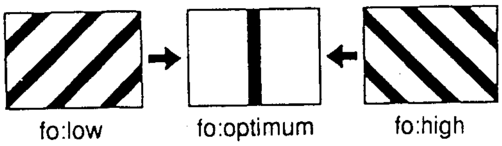
5-1. D BOARD ADJUSTMENTS

—D BOARD (COMPONENT SIDE)—


RV508
PIN PHASE
RV507
V. LIN
RV502
VIDEO PHASE
RV515
BOW
RV511
H. SIZE
RV504
V. CENT
RV514
V. ANG
RV505
V. SIZE
RV509
PIN AMP
IC831
④
RV503
H. FREQ
IC833
⑨
IC502
①
RV833
H/D ΔR
IC832
RV501
V. BLK

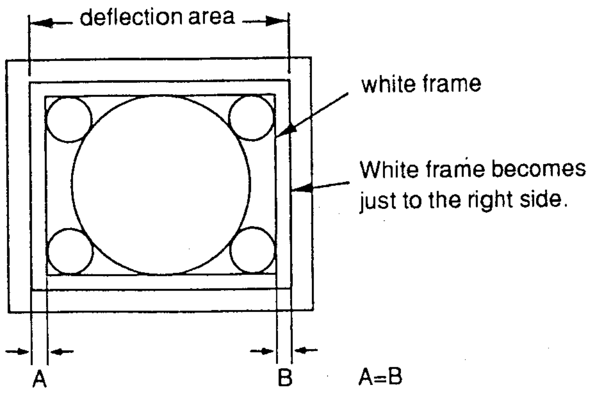
HORIZONTAL OSCILLATION FREQUENCY ADJUSTMENT (RV503)

1. Receive a monoscope signal.
2. Connect pin-① of IC502 to ground with 100µF/16V electrolytic capacitor.
3. Adjust RV503 (H.FREQ) so that the screen streaming to stops.


fo:low
fo:optimum
fo:high

SCREEN PHASE ADJUSTMENTS (RV502, RV512, RV516)

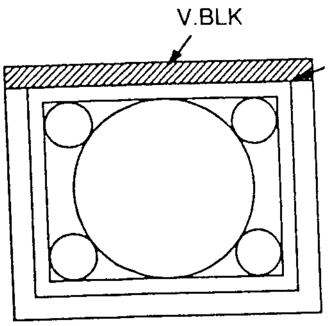
1. Receive a monoscope signal.
2. Set U/S (Under Scan) switch to Under mode.
3. • CONTRAST .... Minimum
   • BRIGHTNESS .... Maximum.
4. Adjust RV511 (H. SIZE) so that the white frame of monoscope signal becomes visible.
5. Adjust RV502 (VIDEO PHASE) so that the monoscope's white frames should have equal width.


deflection area
white frame
White frame becomes just to the right side.
A
B
A=B

V BLK ADJUSTMENTS (RV501)

1. Receive a monoscope signal.
2. Set U/S (Under Scan) switch to Under mode.
3. • CONTRAST .... Minimum
   • BRIGHTNESS .... Maximum.
4. V. BLK Adjustment (RV501)

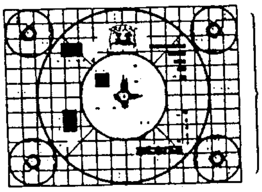
(1) Adjust RV501(V. BLK) so that the upper side white frame of monoscope signal is not blanked.



Make not to blank the upper side white frame of monoscope signal.

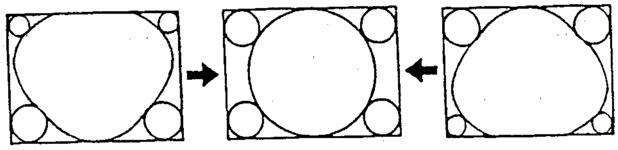
VERTICAL DEFLECTION PART ADJUSTMENTS (RV504, RV505, RV507)

1. Receive a monoscope signal (525.625).
2. • CONTRAST 80%
   • BRIGHTNESS 50%
3. Adjust RV505 (V. SIZE) so that the vertical size of monoscope signal becomes 12.3 or 11.8 frames.

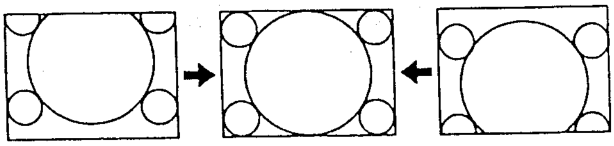


12.3 frames (for 525)
11.8 frames (for 625)

4. Adjust RV507 (V.LIN) the vertical linearity.



5. Adjust RV504 (V. CENT) the vertical position.



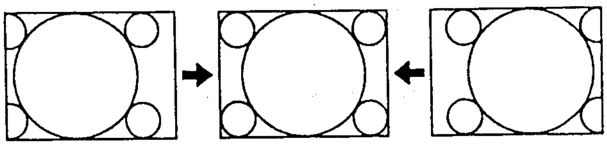
6. V. SIZE ADJUSTMENT (RV505)

(1) Adjust RV505 (V. SIZE) so that the vertical size of monoscope signal becomes 11.75 ± 0.2 frames (525) or 11.3 ± 0.2 frames (625).

HORIZONTAL DEFLECTION PART ADJUSTMENTS (RV508, RV509, RV511, RV514, RV515, RV801/P board)

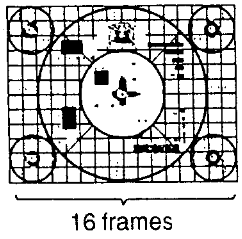
1. Receive a monoscope signal (625).
2. • CONTRAST 80%
   • BRIGHTNESS 50%
3. H. CENT Adjustment (RV801 on P board)

(1) Adjust RV801 on P board (H. CENT) the horizontal position.



4. H. SIZE Adjustment (RV511)

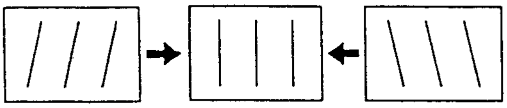
(1) Adjust RV511 (H. SIZE) the horizontal size of 16 frames of monoscope signal.



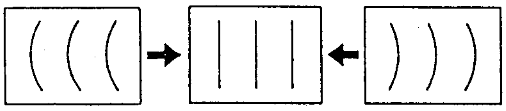
5. PIN AMP. PIN PHASE, V. ANG, BOW ADJUSTMENTS (RV508 RV509, RV514, RV515)

Adjust RV514 (V. ANG) and RV515 (BOW) to correct vertical angular distortion and bow distortion. Adjust RV509 (PIN AMP) and RV508 (PIN PHASE) so that vertical lines become straight.

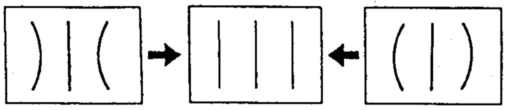
- V. ANG (RV514)



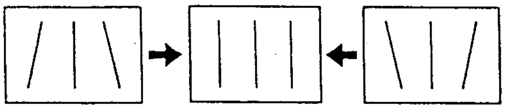
- BOW (RV515)



- PIN AMP (RV509)



- PIN PHASE (RV508)

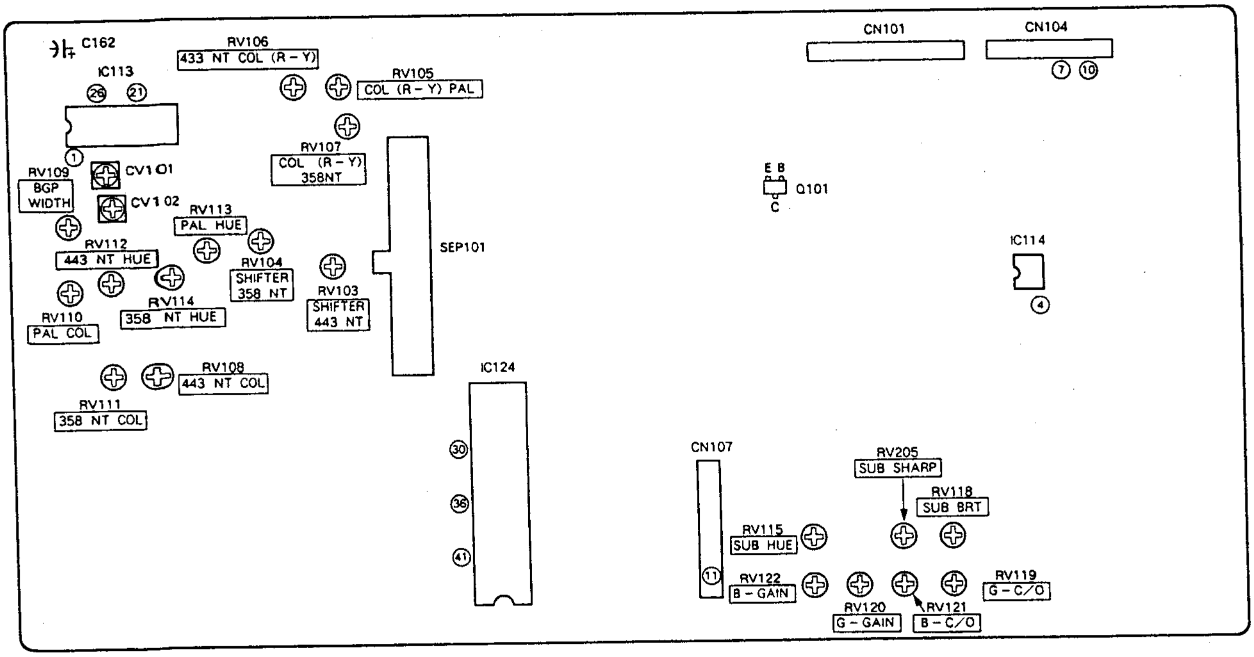


6. H. SIZE ADJUSTMENT (RV511)

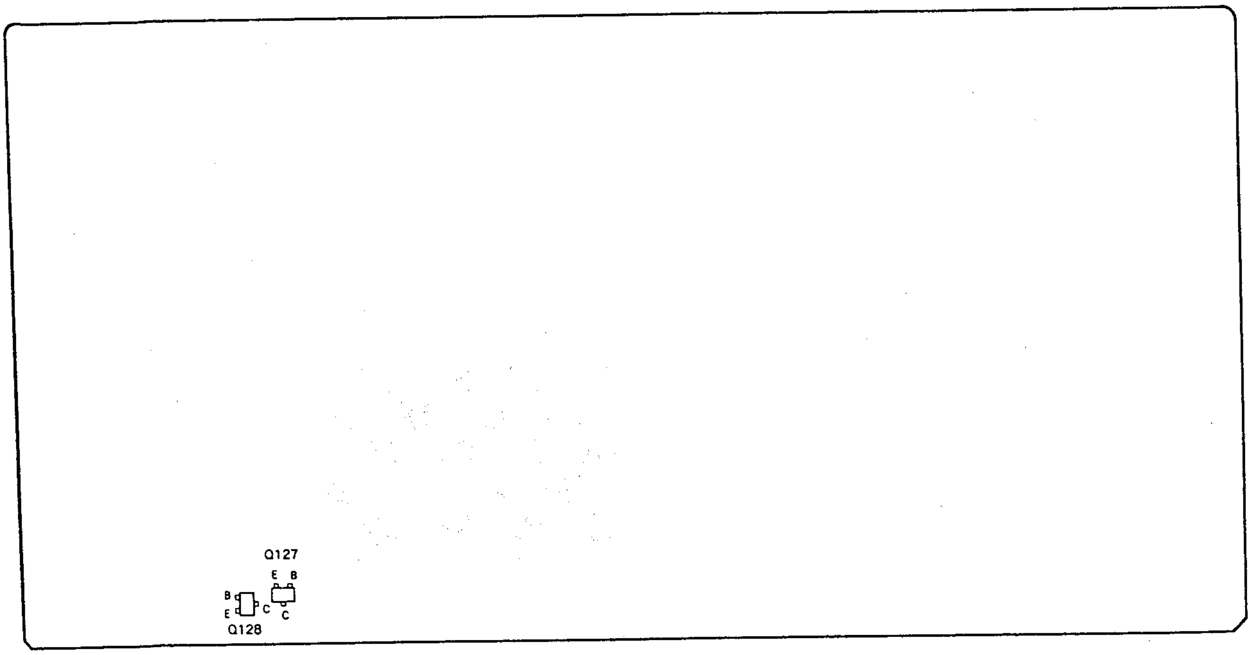
(1) Adjust RV511 (H. SIZE) so that the horizontal size becomes 16 ± 0.2 frames.

B BOARD ADJUSTMENT

-B BOARD (COMPONENT SIDE)-

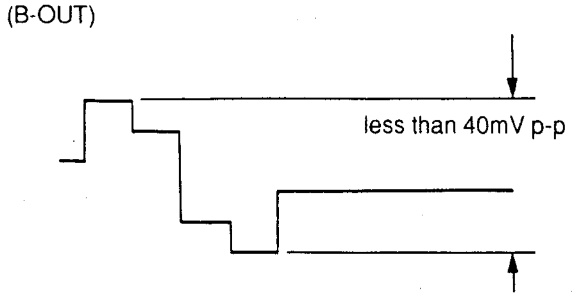

C162
RV106
433 NT COL (R – Y)
IC113
26
21
RV105
COL (R – Y) PAL
RV107
COL (R – Y)
358NT
1
RV109
BGP
WIDTH
CV101
CV102
RV113
PAL HUE
RV112
443 NT HUE
RV104
SHIFTER
358 NT
RV114
358 NT HUE
RV110
PAL COL
RV103
SHIFTER
443 NT
SEP101
RV108
443 NT COL
RV111
358 NT COL
IC124
30
36
41
CN101
CN104
7
10
E B
Q101
C
IC114
4
CN107
11
RV205
SUB SHARP
RV118
SUB BRT
RV115
SUB HUE
RV122
B – GAIN
RV120
G – GAIN
RV121
B – C/O
RV119
G – C/O

-B BOARD (CONDUCTOR SIDE)-


Q127
E B
C
B
E
C
Q128

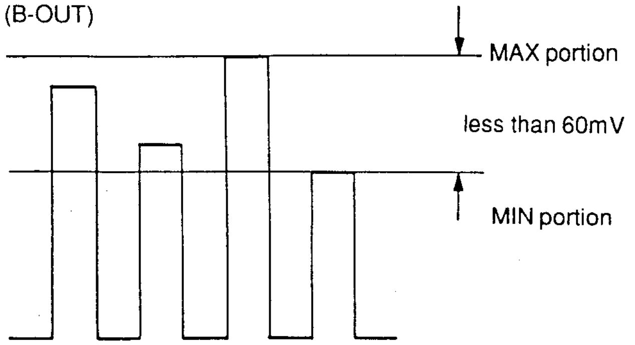
PRIMARY COLOR MATRIX ADJUSTMENT (RV115, RV116, RV123)

1. Supply component color bar signal(75% chroma color bar) to the equipment so that Y signal is supplied to EXT SYNC and R-Y signal to R-Y connectors Operate the equipment in external sync mode.
2. Connect oscilloscope to IC124 pin-㉚ (B-OUT).
3. Adjust RV115 (SUB HUE) to obtain the Blue output as shown in figure.



Adjust so that this portion should have minimum amplitude.

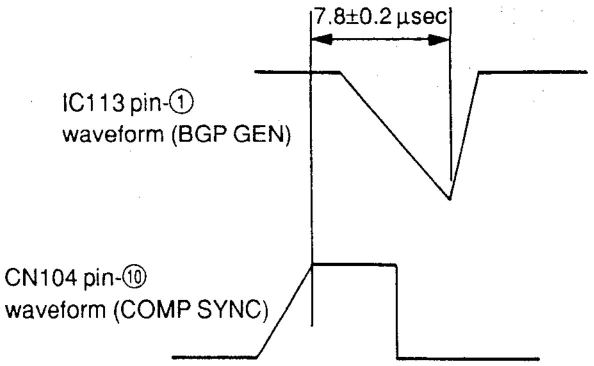
4. Supply component color bar signal (75% color bar) to the component input connector to feed R-Y and B-Y signals. Operate the equipment in internal SYNC mode.
5. Connect oscilloscope to IC124 pin-㉚ (SUB-COL). Adjust RV116 (SUB-COL) so that waveform peaks should have the same level.



(Adjust so that the first and the 4th peaks should have the same level.)

BURST GATE PULSE WIDTH ADJUSTMENT (RV109)

1. Receive color bar signal.
2. Connect dual trace oscilloscope to CN104 connector pin-⑩ (COMP-SYNC) and IC113 (M51279) pin-① (BGP-WIDTH). Adjust RV109 (BGP-WIDTH) to obtain the relationship as shown in the figure.

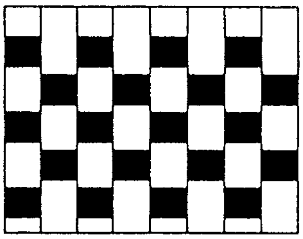


VXO ADJUSTMENT (CV101,CV102)

1. 3.58MHz VXO adjustment (CV101)

(1) Receive NTSC color bar signal.
(2) Connect +5V power line to IC113 pin-㉖ (ID-FILT-REF) via a 4700Ω resistor.
(3) Ground IC109 pin-② by connecting it to ground.
(4) Ground C162 – negative side by connecting it to ground.
(5) Connect frequency counter to IC113 pin-㉑. Adjust CV101 (358FO) for 3579545±20Hz.
(This adjustment can be alternatively done by observing screen as below.)

Adjust color synchronization by CV101 (358FO).



Adjust so that color stripes disappear and the hue change is stabilized extremely.

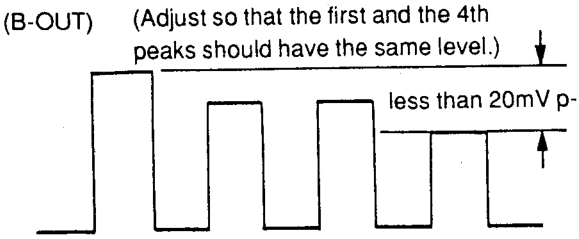
NTSC 4.43MHZ COLOR DEMODULATION ADJUSTMENT (RV108,RV112,RV103,RV106)

1. NTSC 4.43MHz - COLOR adjustment (RV108,RV112)

(1) Receive NTSC 4.43 color bar signal (75% color bar).

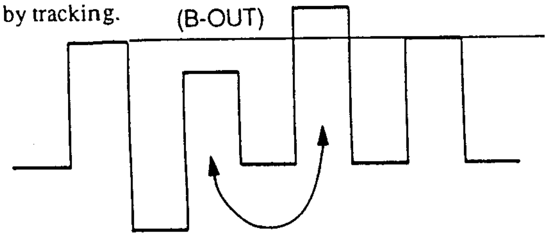
(2) Connect an oscilloscope to IC124 pin-㉚ (B-OUT).

(3) Adjust RV108 (443NT-COL) so that waveform peaks should have the same level (most flat).



(Adjust so that the first and the 4th peaks should have the same level.)

(4) When cyan and magenta have level difference, adjust RV112 (443NT-HUE) and RV108 (443NT-COL) alternatively to remove, by tracking.



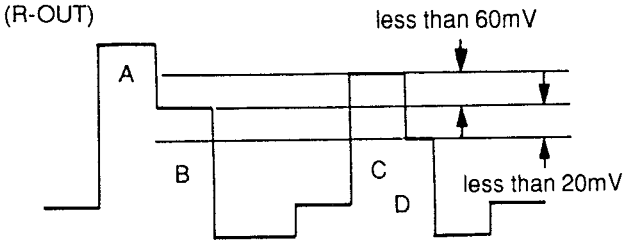
When cyan and magenta have level difference, adjust RV112 and RV108 alternatively to remove.

2. NTSC 4.43MHz - COLOR (R-Y) adjustment (RV103, RV106)

(1) Receive the NTSC 4.43 color bar signal (75%, chroma color bar).

(2) Connect an oscilloscope to the Q127 emitter (R-Y OUT), and adjust RV103(443NT-SHIFT) so that the output of the burst section (B-Y axis signal output) becomes 0.

(3) Connect an oscilloscope to IC124 pin-㊶ (R-OUT). Adjust RV106 (443NT-COL (R-Y)) so that the level difference should be minimum.



(Adjust for B=D. [less than 20mV] Also level difference between B and C should be less than 60mV.)

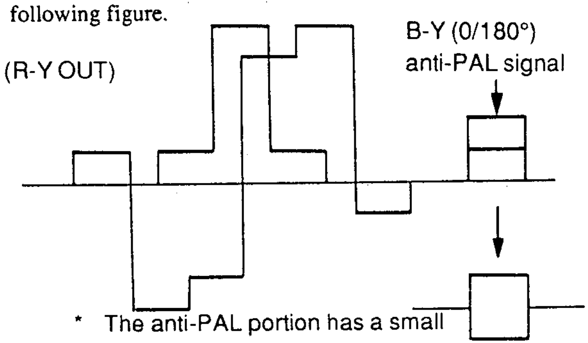
PAL COLOR DEMODULATION ADJUSTMENT (RV113,RV2/SEP101, RV110,RV105,RV205)

1. PAL PHASE Adjustment (RV113)

(1) Receive the special PAL color-bar.

(2) Connect an oscilloscope to emitter of Q127 (R-Y OUT).

(3) Adjust RV113 (PAL-PHASE) so that B-Y (0/180°) anti-PAL portion (in the R-Y demodulated output) becomes "0" (flat) as following figure.

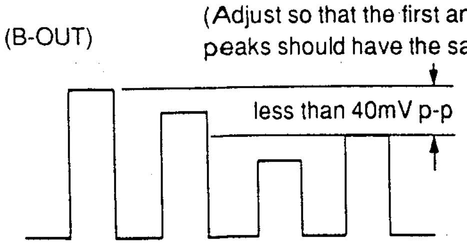


* The anti-PAL portion has a small level difference in every other horizontal period. So, adjust so that average becomes "0".

2. PAL COLOR ADJUSTMENT (RV110)

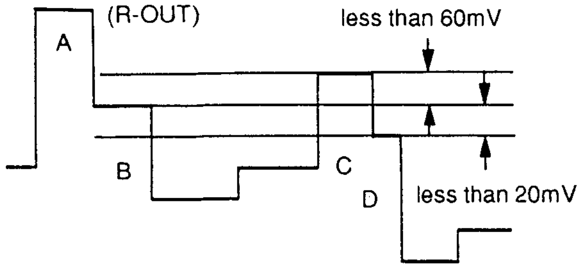
(1) Receive PAL color bar signal (75% color bar).
(2) Connect an oscilloscope to IC124 pin-㉚ (B-OUT).
(3) Adjust RV110 (PAL-COL) so that waveform peaks should have the same level (most flat).

(Adjust so that the first and the 4th peaks should have the same level.)



3. PAL-COLOR-(R-Y) ADJUSTMENT (RV105)

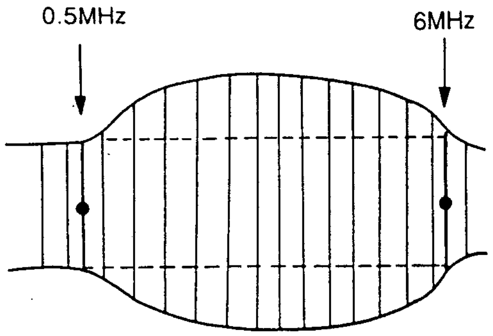
(1) Connect an oscilloscope to IC124 pin-㊶ (R-OUT).
(2) Adjust RV105 (PAL-COL-(R-Y)) so that waveform peaks should have the same level (most flat).



(Adjust for B=D. [less than 20mV] Also level difference between B and C should be less than 60mV.)

SUB-SHARP ADJUSTMENT (RV205)

(1) Receive a sweep signal (or multi-burst).
* • Bandwidth should be more than 10MHz (flat).
  • Composite sync should be included.
  • Turn burst off.
(2) Connect an oscilloscope to IC124 pin-㊱ (G-OUT).
(3) Adjust RV205 (SUB-SHARP) as shown.

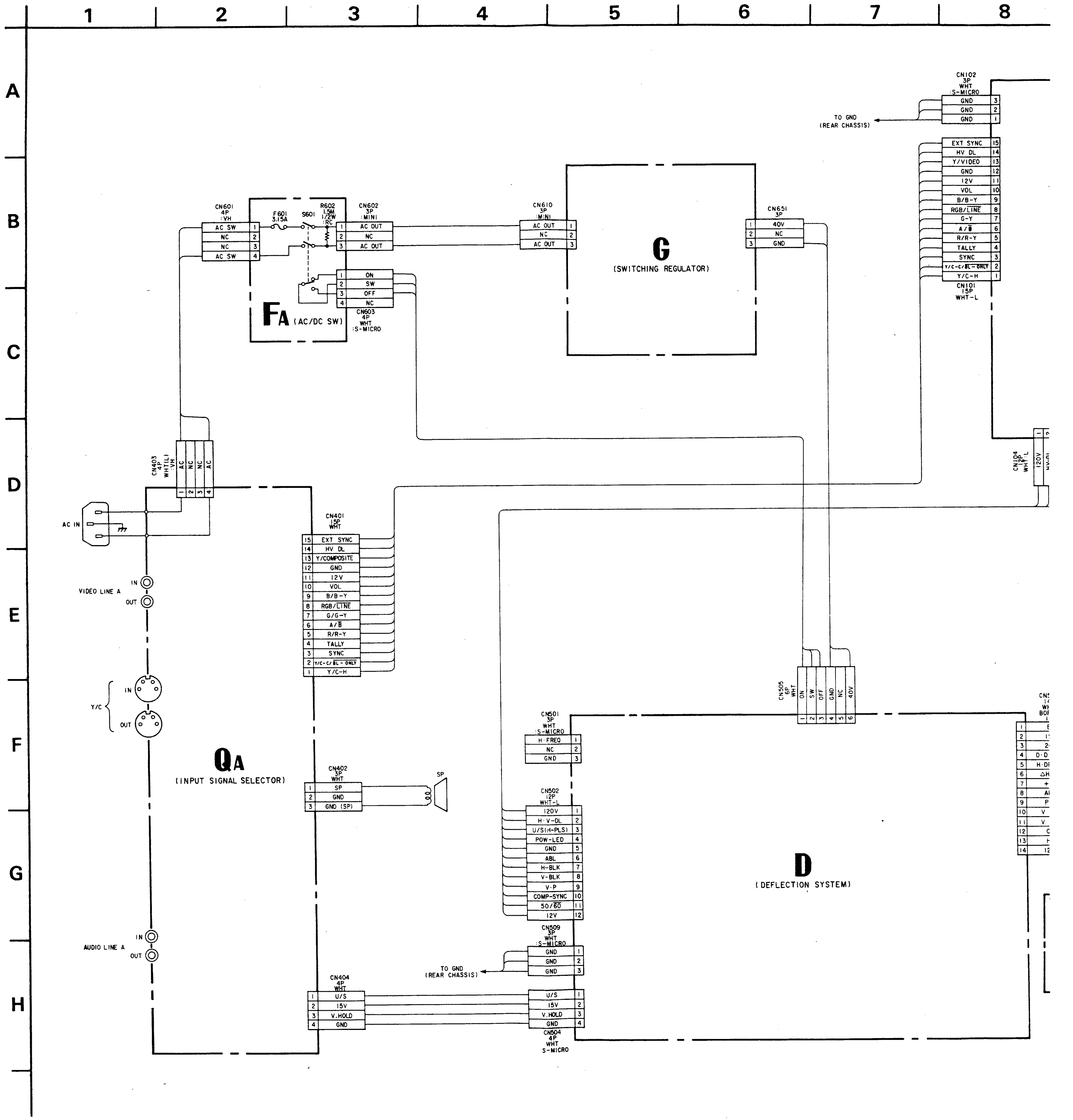


Example of sweep signal output waveform

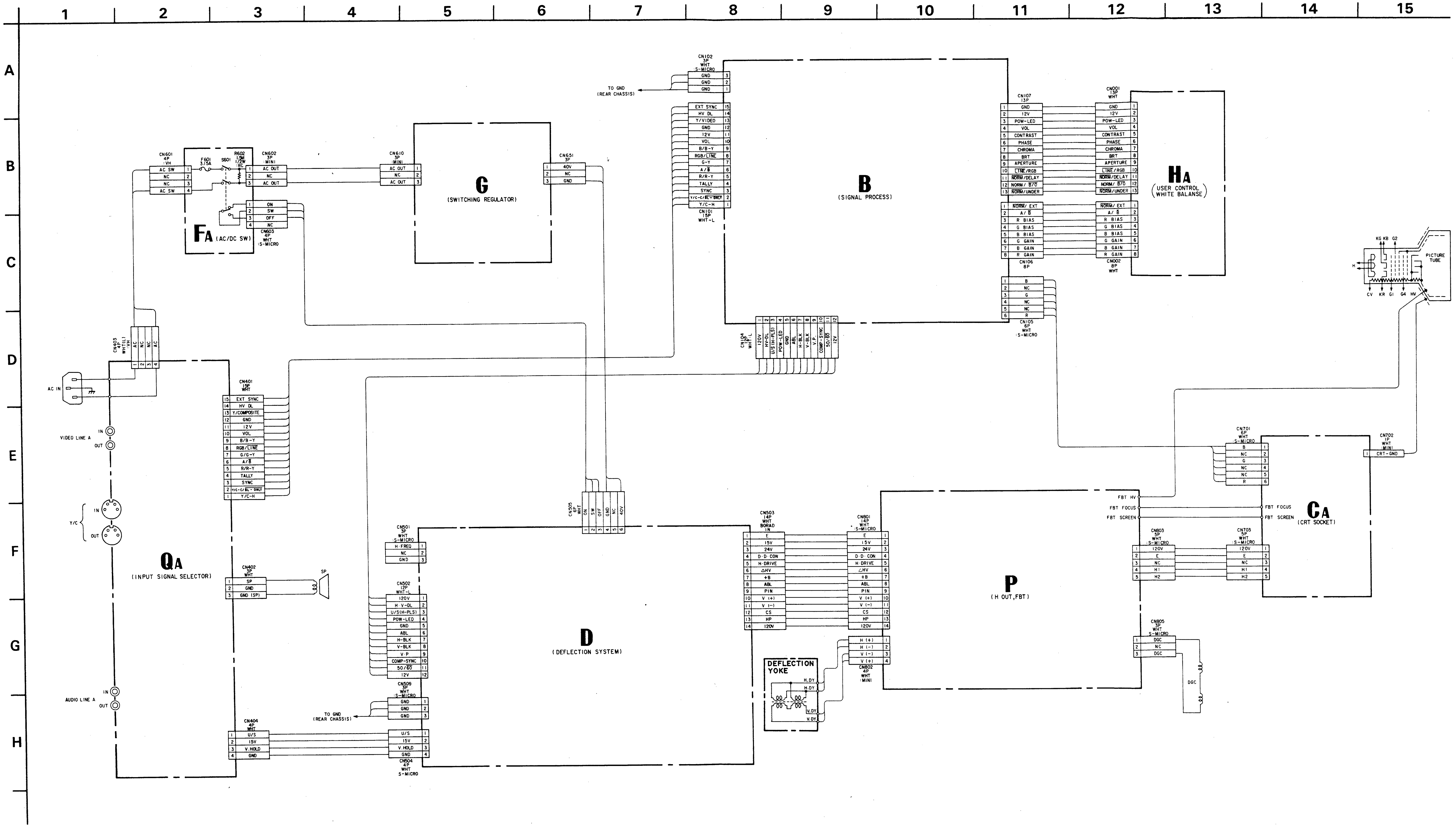
[specification]
6MHz/0.5MHz=0±0.5dB

SECTION 6
DIAGRAMS

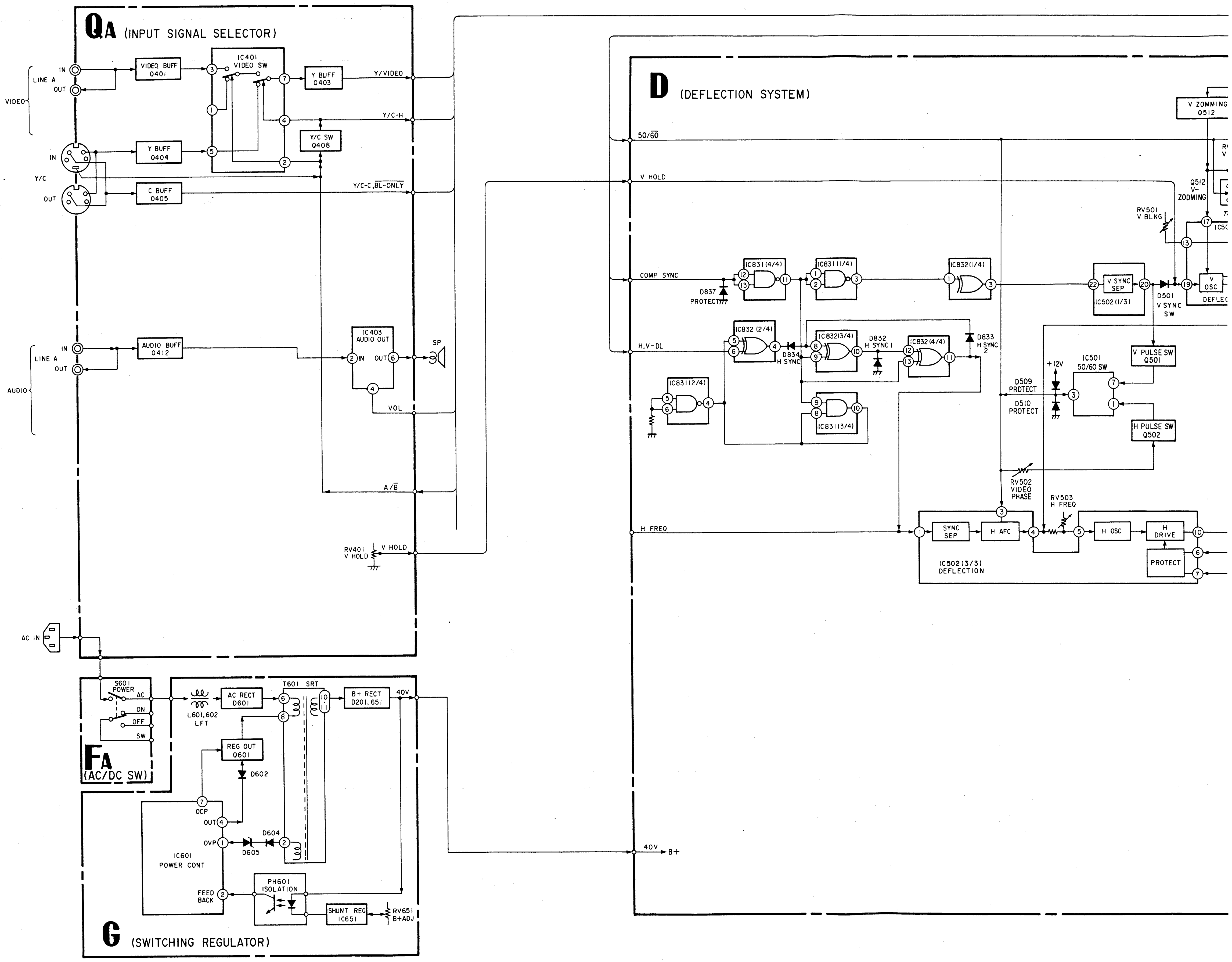
6-1. FRAME SCHEMATIC DIAGRAM

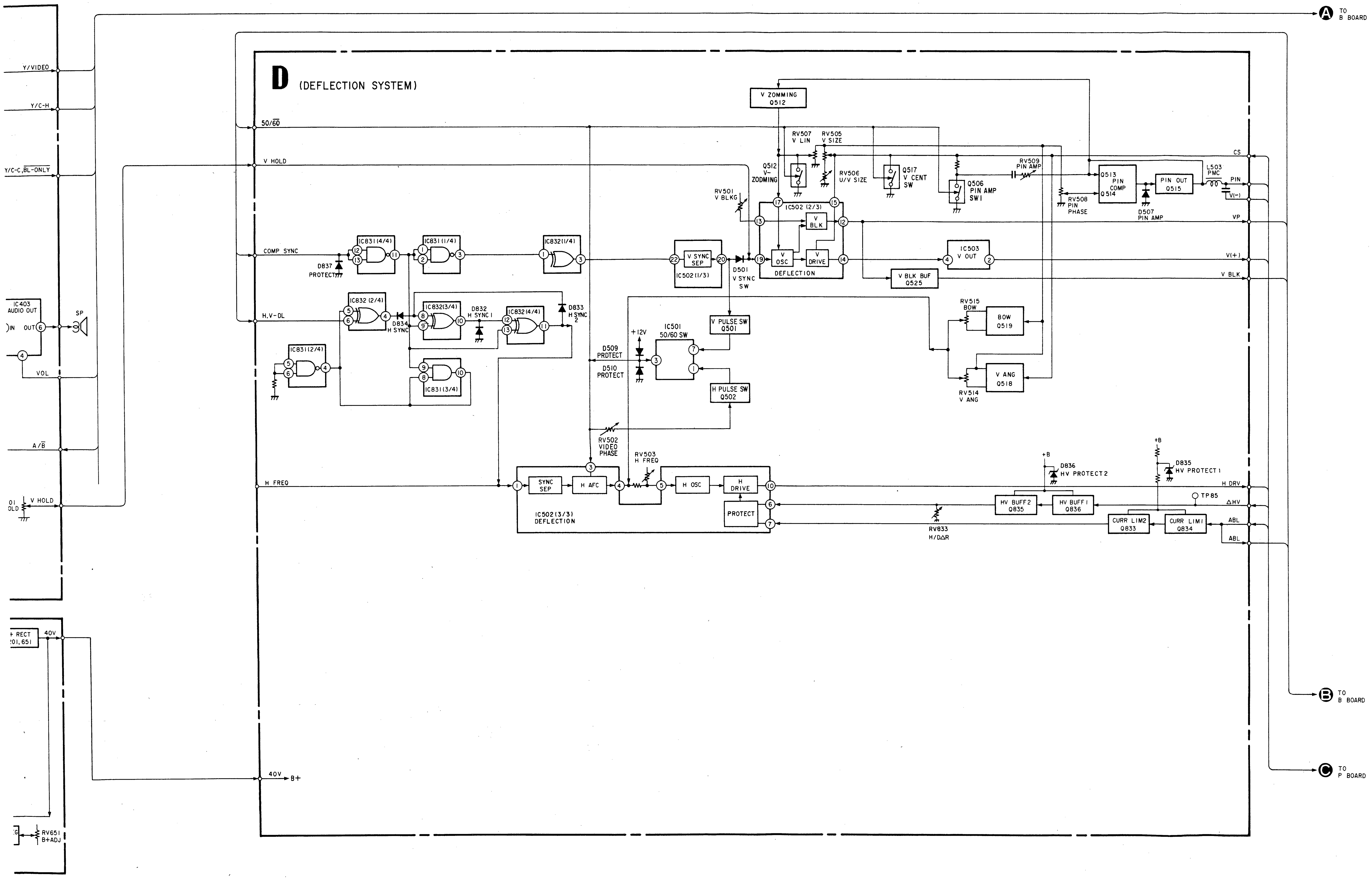

1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
H
CN601 4P :VH
AC SW 1
NC 2
NC 3
AC SW 4
F601 3.15A
S601
R602 1.5M 1/2W :RC
CN602 3P :MINI
1 AC OUT
2 NC
3 AC OUT
1 ON
2 SW
3 OFF
4 NC
CN603 4P WHT :S-MICRO
FA (AC/DC SW)
CN610 3P :MINI
AC OUT 1
NC 2
AC OUT 3
G
(SWITCHING REGULATOR)
CN651 3P
1 40V
2 NC
3 GND
CN102 3P WHT :S-MICRO
GND 3
GND 2
GND 1
TO GND (REAR CHASSIS)
EXT SYNC 15
HV DL 14
Y/VIDEO 13
GND 12
12V 11
VOL 10
B/B-Y 9
RGB/$\overline{\text{LINE}}$ 8
G-Y 7
A/$\overline{\text{B}}$ 6
R/R-Y 5
TALLY 4
SYNC 3
Y/C-C/$\overline{\text{BL}}$-ONLY 2
Y/C-H 1
CN101 15P WHT-L
CN104 12P WHT-L
120V
CN403 4P WHT(L) :VH
AC
NC
NC
AC
1
2
3
4
AC IN
VIDEO LINE A
IN
OUT
Y/C
IN
OUT
AUDIO LINE A
IN
OUT
CN401 15P WHT
15 EXT SYNC
14 HV DL
13 Y/COMPOSITE
12 GND
11 12V
10 VOL
9 B/B-Y
8 RGB/$\overline{\text{LINE}}$
7 G/G-Y
6 A/$\overline{\text{B}}$
5 R/R-Y
4 TALLY
3 SYNC
2 Y/C-C/$\overline{\text{BL}}$-ONLY
1 Y/C-H
QA
(INPUT SIGNAL SELECTOR)
CN402 3P WHT
1 SP
2 GND
3 GND (SP)
SP
CN404 4P WHT
1 U/S
2 15V
3 V.HOLD
4 GND
TO GND (REAR CHASSIS)
CN505 6P WHT
ON
SW
OFF
GND
NC
40V
1
2
3
4
5
6
CN501 3P WHT :S-MICRO
H·FREQ 1
NC 2
GND 3
CN502 12P WHT-L
120V 1
H·V-DL 2
U/S(H-PLS) 3
POW-LED 4
GND 5
ABL 6
H-BLK 7
V-BLK 8
V·P 9
COMP-SYNC 10
50/$\overline{60}$ 11
12V 12
CN509 3P WHT :S-MICRO
GND 1
GND 2
GND 3
U/S 1
15V 2
V.HOLD 3
GND 4
CN504 4P WHT S-MICRO
D
(DEFLECTION SYSTEM)

6-1. FRAME SCHEMATIC DIAGRAM

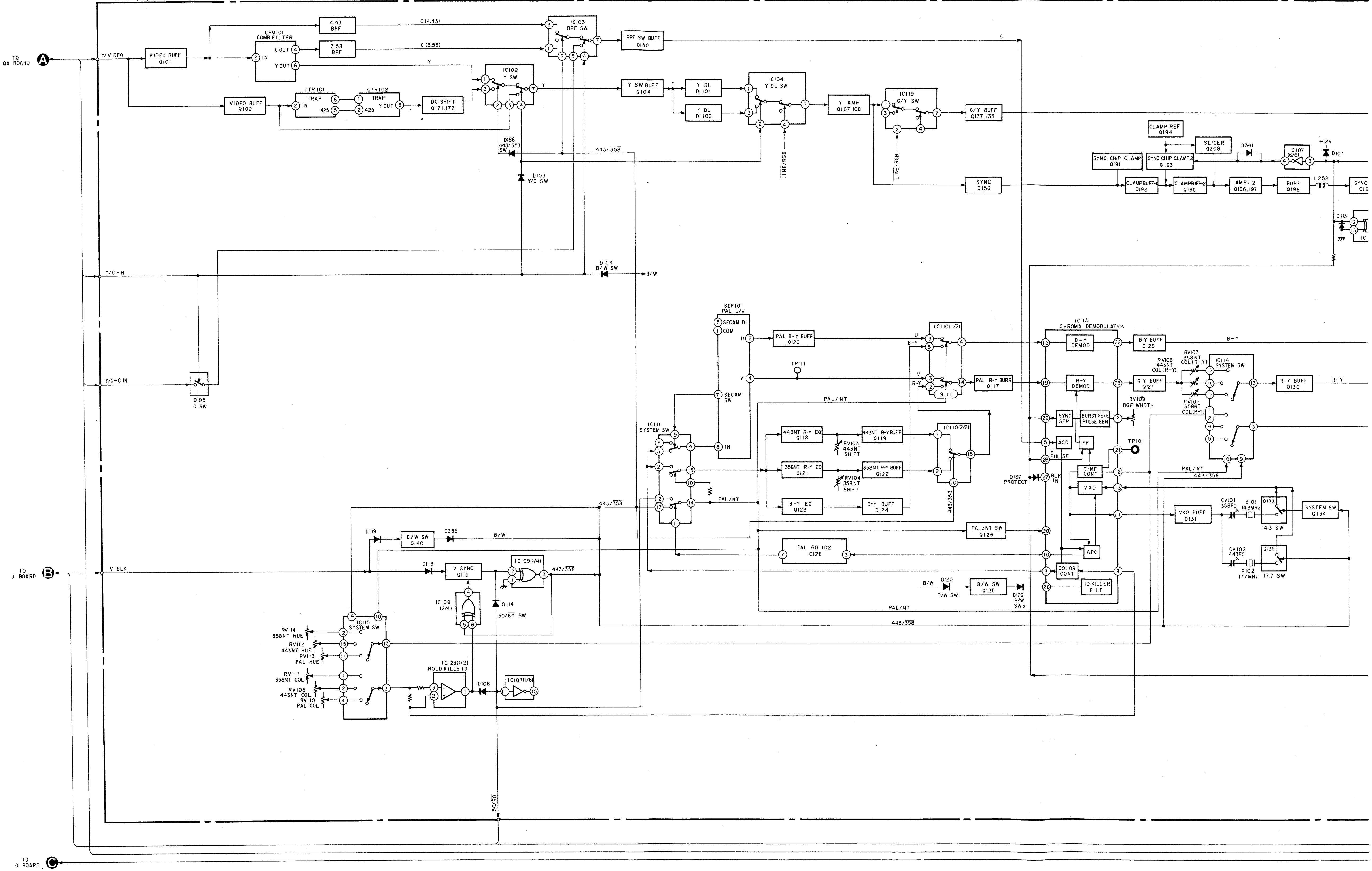

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
FA (AC/DC SW)
G (SWITCHING REGULATOR)
B (SIGNAL PROCESS)
HA (USER CONTROL WHITE BALANSE)
QA (INPUT SIGNAL SELECTOR)
D (DEFLECTION SYSTEM)
P (H OUT,FBT)
CA (CRT SOCKET)
DEFLECTION YOKE
PICTURE TUBE
CN601 4P VH
AC SW
NC
NC
AC SW
F601 3.15A
S601
R602 1.5M 1/2W RC
CN602 3P MINI
AC OUT
NC
AC OUT
CN603 4P WHT S-MICRO
ON
SW
OFF
NC
CN610 3P MINI
CN651 3P
40V
NC
GND
CN102 3P WHT S-MICRO
GND
TO GND (REAR CHASSIS)
CN101 15P WHT-L
EXT SYNC
HV DL
Y/VIDEO
12V
VOL
B/B-Y
RGB/LINE
G-Y
A/B
R/R-Y
TALLY
SYNC
Y/C-C/BL-ONLY
Y/C-H
CN107 13P
CN001 13P WHT
POW-LED
CONTRAST
PHASE
CHROMA
BRT
APERTURE
LINE/RGB
NORM/DELAY
NORM/B70
NORM/UNDER
CN106 8P
CN002 8P WHT
NORM/EXT
R BIAS
G BIAS
B BIAS
G GAIN
B GAIN
R GAIN
CN105 6P WHT S-MICRO
B
NC
G
R
CN104 12P WHT-L
120V
HV-DL
U/S(H-PLS)
ABL
H-BLK
V-BLK
V.P
COMP-SYNC
50/60
CN403 4P WHT(L) VH
AC IN
VIDEO LINE A
IN
OUT
Y/C
AUDIO LINE A
CN401 15P WHT
Y/COMPOSITE
G/G-Y
CN402 3P WHT
SP
GND (SP)
CN404 4P WHT
U/S
15V
V.HOLD
CN505 6P WHT
CN501 3P WHT S-MICRO
H-FREQ
CN502 12P WHT-L
H V-DL
U/S(H-PLS)
CN509 3P WHT S-MICRO
CN504 4P WHT S-MICRO
CN503 14P WHT BORAD IN
E
24V
D·D·CON
H·DRIVE
ΔHV
+B
PIN
V (+)
V (-)
CS
HP
CN801 14P WHT S-MICRO
CN802 4P WHT MINI
H (+)
H (-)
H.DY
V.DY
FBT HV
FBT FOCUS
FBT SCREEN
CN803 5P WHT S-MICRO
CN703 5P WHT S-MICRO
H1
H2
CN805 3P WHT S-MICRO
DGC
CN701 6P WHT S-MICRO
CN702 1P WHT MINI
CRT-GND
KG KB G2
H
CV KR G1 G4 HV

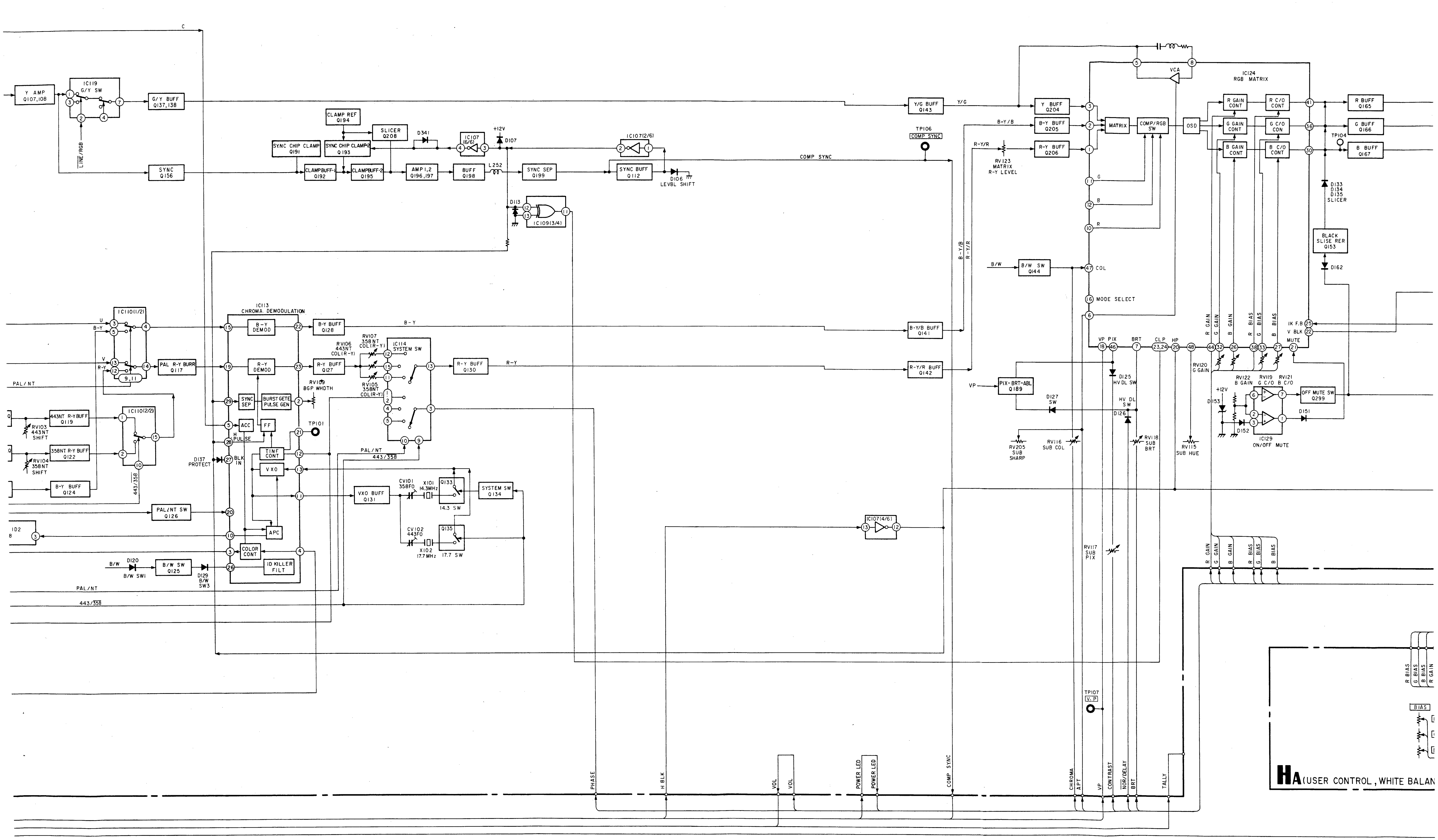
6-2. BLOCK DIAGRAM (1)

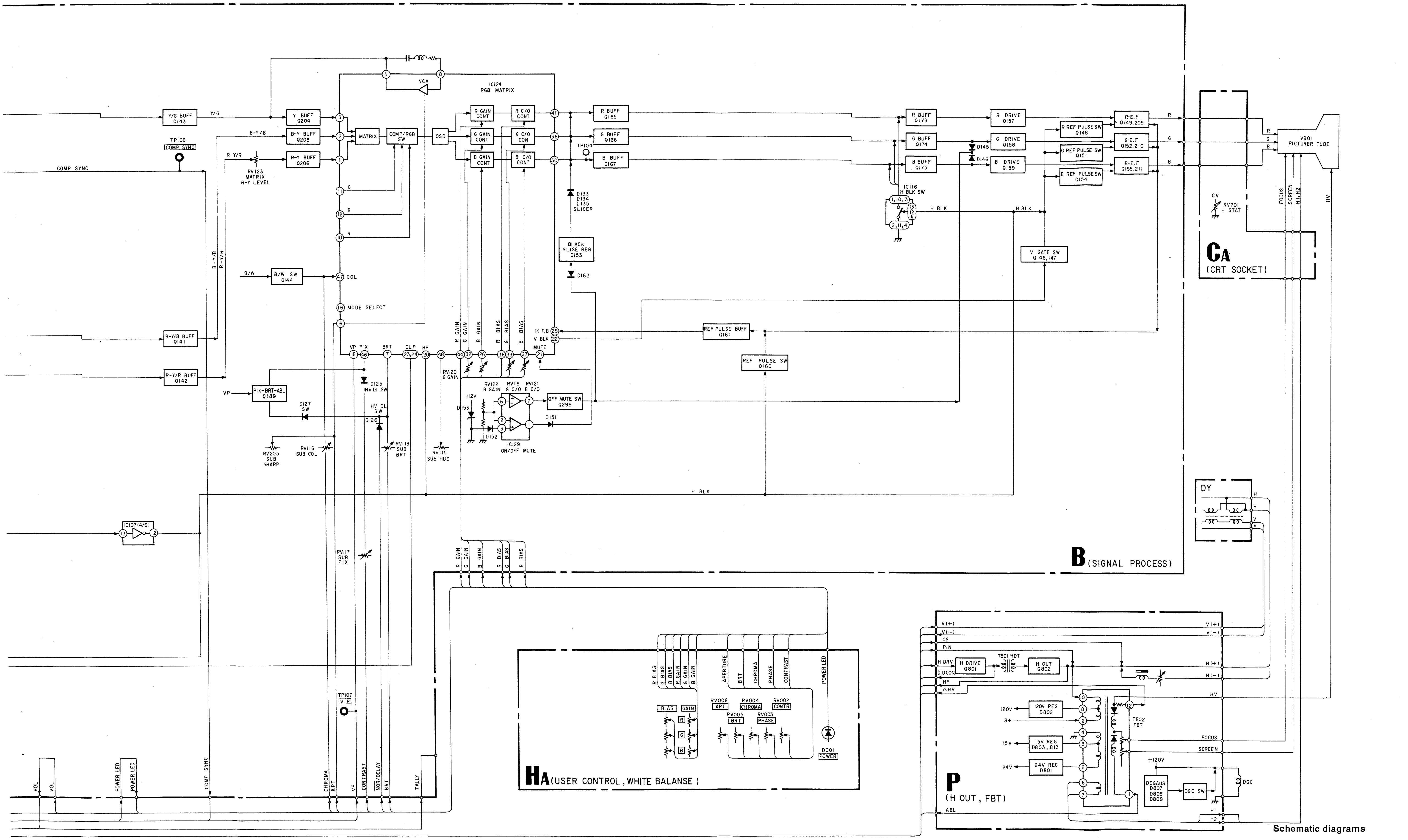

QA (INPUT SIGNAL SELECTOR)
VIDEO
LINE A
IN
OUT
VIDEO BUFF Q401
IC401 VIDEO SW
Y BUFF Q403
Y/VIDEO
Y/C-H
Y/C SW Q408
Y/C
Y BUFF Q404
C BUFF Q405
Y/C-C,BL-ONLY
AUDIO
AUDIO BUFF Q412
IC403 AUDIO OUT
IN
OUT
SP
VOL
A/B
RV401 V HOLD
V HOLD
AC IN
S601 POWER
AC
ON
OFF
SW
FA (AC/DC SW)
L601,602 LFT
AC RECT D601
T601 SRT
B+ RECT D201,651
40V
REG OUT Q601
D602
OCP
OUT
OVP
D604
D605
IC601 POWER CONT
FEED BACK
PH601 ISOLATION
SHUNT REG IC651
RV651 B+ADJ
G (SWITCHING REGULATOR)
D (DEFLECTION SYSTEM)
50/60
V HOLD
COMP SYNC
D837 PROTECT
IC831(4/4)
IC831(1/4)
IC832(1/4)
H.V-DL
IC832(2/4)
D834 H SYNC
IC832(3/4)
D832 H SYNC 1
IC832(4/4)
D833 H SYNC 2
IC831(2/4)
IC831(3/4)
V ZOMMING Q512
Q512 V-ZOOMING
RV501 V BLKG
V SYNC SEP
IC502(1/3)
D501 V SYNC SW
V OSC
DEFLEC
V PULSE SW Q501
+12V
IC501 50/60 SW
D509 PROTECT
D510 PROTECT
H PULSE SW Q502
RV502 VIDEO PHASE
RV503 H FREQ
H FREQ
SYNC SEP
H AFC
H OSC
H DRIVE
PROTECT
IC502(3/3) DEFLECTION
40V
B+


D (DEFLECTION SYSTEM)
TO B BOARD
TO B BOARD
TO P BOARD
Y/VIDEO
Y/C-H
Y/C-C,BL-ONLY
IC403 AUDIO OUT
IN
OUT
SP
VOL
A/B
V HOLD
RECT
40V
RV651 B+ADJ
50/60
V HOLD
COMP SYNC
H.V-DL
H FREQ
40V
B+
IC831(4/4)
IC831(1/4)
IC832(1/4)
IC831(2/4)
IC831(3/4)
IC832(2/4)
IC832(3/4)
IC832(4/4)
D837 PROTECT
D834 H SYNC
D832 H SYNC 1
D833 H SYNC 2
V SYNC SEP
IC502(1/3)
D501 V SYNC SW
V ZOMMING Q512
Q512 V-ZOOMING
RV507 V LIN
RV505 V SIZE
RV506 U/V SIZE
RV501 V BLKG
Q517 V CENT SW
Q506 PIN AMP SW1
RV509 PIN AMP
RV508 PIN PHASE
Q513 PIN COMP Q514
D507 PIN AMP
PIN OUT Q515
L503 PMC
IC502 (2/3)
V BLK
V OSC
V DRIVE
DEFLECTION
IC503 V OUT
V BLK BUF Q525
RV515 BOW
BOW Q519
V ANG Q518
RV514 V ANG
CS
PIN
V(-)
VP
V(+)
V BLK
V PULSE SW Q501
IC501 50/60 SW
+12V
D509 PROTECT
D510 PROTECT
H PULSE SW Q502
RV502 VIDEO PHASE
RV503 H FREQ
SYNC SEP
H AFC
H OSC
H DRIVE
PROTECT
IC502(3/3) DEFLECTION
+B
D836 HV PROTECT 2
D835 HV PROTECT 1
TP85
HV BUFF2 Q835
HV BUFF1 Q836
CURR LIM2 Q833
CURR LIM1 Q834
RV833 H/ΔR
H DRV
ΔHV
ABL
ABL

BLOCK DIAGRAM (2)


TO QA BOARD A
Y/VIDEO
VIDEO BUFF Q101
CFM101 COMB FILTER
IN
C OUT
Y OUT
4.43 BPF
3.58 BPF
C (4.43)
C (3.58)
IC103 BPF SW
BPF SW BUFF Q150
C
Y
VIDEO BUFF Q102
CTR101 TRAP
CTR102 TRAP
425
Y OUT
DC SHIFT Q171,172
IC102 Y SW
Y SW BUFF Q104
Y DL DL101
Y DL DL102
IC104 Y DL SW
Y AMP Q107,108
IC119 G/Y SW
G/Y BUFF Q137,138
D186 443/353 SW
443/358
D103 Y/C SW
LINE/RGB
SYNC Q156
CLAMP REF Q194
SLICER Q208
D341
IC107 (6/6)
+12V
D107
SYNC CHIP CLAMP Q191
SYNC CHIP CLAMP-2 Q193
CLAMPBUFF-1 Q192
CLAMPBUFF-2 Q195
AMP1,2 Q196,197
BUFF Q198
L252
SYNC Q19
D113
IC
Y/C-H
D104 B/W SW
B/W
Y/C-C IN
Q105 C SW
SEP101 PAL U/V
SECAM DL
COM
SECAM SW
IN
PAL B-Y BUFF Q120
TP111
IC110(1/2)
U
B-Y
V
R-Y
9,11
PAL R-Y BURR Q117
PAL/NT
IC111 SYSTEM SW
443NT R-Y EQ Q118
RV103 443NT SHIFT
443NT R-Y BUFF Q119
358NT R-Y EQ Q121
RV104 358NT SHIFT
358NT R-Y BUFF Q122
B-Y EQ Q123
B-Y BUFF Q124
IC110(2/2)
PAL 60 ID2 IC128
PAL/NT SW Q126
IC113 CHROMA DEMODULATION
B-Y DEMOD
R-Y DEMOD
SYNC SEP
BURST GETE PULSE GEN
ACC
FF
H PULSE
TINT CONT
VXO
APC
COLOR CONT
ID KILLER FILT
D137 PROTECT
BLK IN
TP101
B-Y BUFF Q128
R-Y BUFF Q127
RV106 443NT COL(R-Y)
RV107 358NT COL(R-Y)
RV109 BGP WHDTH
RV105 358NT COL(R-Y)
IC114 SYSTEM SW
R-Y BUFF Q130
B-Y
R-Y
VXO BUFF Q131
CV101 358F0
X101 14.3MHz
Q133
14.3 SW
CV102 443F0
X102 17.7MHz
Q135
17.7 SW
SYSTEM SW Q134
B/W
D120 B/W SW1
B/W SW Q125
D129 B/W SW3
D119
B/W SW Q140
D285
D118
V SYNC Q115
IC109(1/4)
IC109 (2/4)
D114
50/60 SW
TO D BOARD B
V BLK
IC115 SYSTEM SW
RV114 358NT HUE
RV112 443NT HUE
RV113 PAL HUE
RV111 358NT COL
RV108 443NT COL
RV110 PAL COL
IC123(1/2) HOLD KILLE ID
D108
IC107(1/6)
50/60
TO D BOARD C

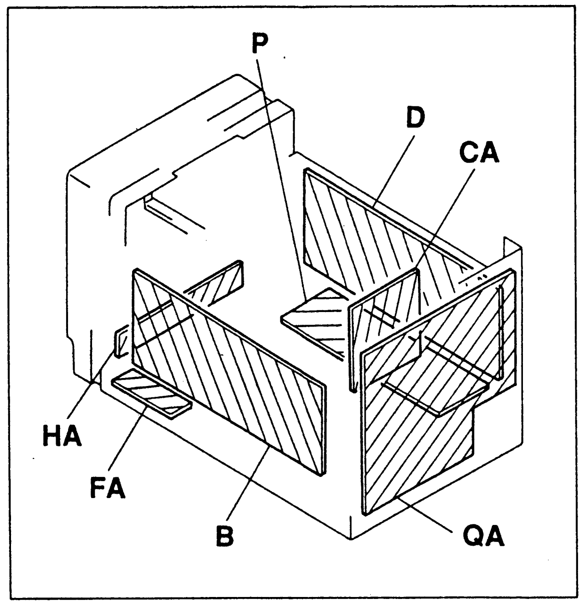

Y AMP Q107,108
IC119 G/Y SW
LINE/RGB
G/Y BUFF Q137,138
SYNC Q156
CLAMP REF Q194
SLICER Q208
D341
IC107 (6/6)
+12V
D107
IC107(2/6)
SYNC CHIP CLAMP Q191
SYNC CHIP CLAMP-2 Q193
CLAMPBUFF-1 Q192
CLAMPBUFF-2 Q195
AMP1,2 Q196,197
BUFF Q198
L252
SYNC SEP Q199
SYNC BUFF Q112
D106 LEVBL SHIFT
COMP SYNC
D113
IC109(3/4)
TP106 COMP SYNC
Y/G BUFF Q143
Y/G
B-Y/B
R-Y/R
RV123 MATRIX R-Y LEVEL
Y BUFF Q204
B-Y BUFF Q205
R-Y BUFF Q206
MATRIX
COMP/RGB SW
OSD
VCA
IC124 RGB MATRIX
R GAIN CONT
G GAIN CONT
B GAIN CONT
R C/O CONT
G C/O CON
B C/O CONT
R BUFF Q165
G BUFF Q166
B BUFF Q167
TP104
D133 D134 D135 SLICER
BLACK SLISE RER Q153
D162
B/W
B/W SW Q144
COL
MODE SELECT
IK F.B
V BLK
MUTE
R GAIN
G GAIN
B GAIN
R BIAS
G BIAS
B BIAS
VP PIX
BRT
CLP
HP
RV120 G GAIN
RV122 B GAIN
RV119 G C/O
RV121 B C/O
+12V
D153
D152
IC129 ON/OFF MUTE
OFF MUTE SW Q299
D151
VP
PIX-BRT-ABL Q189
D125 HV DL SW
HV DL SW
D126
D127 SW
RV205 SUB SHARP
RV116 SUB COL
RV118 SUB BRT
RV115 SUB HUE
IC110(1/2)
U
B-Y
V
R-Y
PAL/NT
IC113 CHROMA DEMODULATION
B-Y DEMOD
R-Y DEMOD
B-Y BUFF Q128
R-Y BUFF Q127
B-Y
R-Y
B-Y/B BUFF Q141
R-Y/R BUFF Q142
PAL R-Y BURR Q117
RV107 358NT COL(R-Y)
RV106 443NT COL(R-Y)
RV105 358NT COL(R-Y)
RV109 BGP WHDTH
IC114 SYSTEM SW
R-Y BUFF Q130
SYNC SEP
BURST GETE PULSE GEN
ACC
FF
H PULSE
TINT CONT
VXO
APC
COLOR CONT
ID KILLER FILT
TP101
D137 PROTECT
BLK IN
PAL/NT
443/358
VXO BUFF Q131
CV101 358FO
X101 14.3MHz
Q133
14.3 SW
SYSTEM SW Q134
CV102 443FO
X102 17.7MHz
Q135
17.7 SW
443NT R-Y BUFF Q119
RV103 443NT SHIFT
358NT R-Y BUFF Q122
RV104 358NT SHIFT
IC110(2/2)
B-Y BUFF Q124
PAL/NT SW Q126
ID2
B/W
D120 B/W SW1
B/W SW Q125
D129 B/W SW3
IC107(4/6)
RV117 SUB PIX
TP107 V.P
PHASE
H BLK
VOL
POWER LED
COMP SYNC
CHROMA
APT
VP
CONTRAST
NOR/DELAY
BRT
TALLY
BIAS
HA (USER CONTROL, WHITE BALAN


IC124 RGB MATRIX
VCA
Y/G BUFF Q143
Y BUFF Q204
B-Y BUFF Q205
R-Y BUFF Q206
MATRIX
COMP/RGB SW
OSD
R GAIN CONT
G GAIN CONT
B GAIN CONT
R C/O CONT
G C/O CON
B C/O CONT
R BUFF Q165
G BUFF Q166
B BUFF Q167
TP106 COMP SYNC
COMP SYNC
TP104
RV123 MATRIX R-Y LEVEL
D133 D134 D135 SLICER
BLACK SLISE RER Q153
D162
B/W SW Q144
B/W
COL
MODE SELECT
B-Y/B BUFF Q141
R-Y/R BUFF Q142
PIX-BRT-ABL Q189
VP
D127 SW
D125 HV DL SW
HV DL SW
D126
RV205 SUB SHARP
RV116 SUB COL
RV118 SUB BRT
RV115 SUB HUE
RV120 G GAIN
RV122 B GAIN
RV119 G C/O
RV121 B C/O
+12V
D153
D152
IC129 ON/OFF MUTE
OFF MUTE SW Q299
D151
IK F.B
V BLK
MUTE
REF PULSE BUFF Q161
REF PULSE SW Q160
H BLK
IC107(4/6)
RV117 SUB PIX
TP107 V.P
R BUFF Q173
G BUFF Q174
B BUFF Q175
IC116 H BLK SW
D145
D146
R DRIVE Q157
G DRIVE Q158
B DRIVE Q159
R REF PULSE SW Q148
G REF PULSE SW Q151
B REF PULSE SW Q154
V GATE SW Q146,147
R-E.F Q149,209
G-E.F Q152,210
B-E.F Q155,211
V901 PICTURER TUBE
CV RV701 H STAT
FOCUS
SCREEN
H1, H2
HV
CA (CRT SOCKET)
DY
B (SIGNAL PROCESS)
R GAIN
G GAIN
B GAIN
R BIAS
G BIAS
B BIAS
APERTURE
BRT
CHROMA
PHASE
CONTRAST
POWER LED
RV006 APT
RV004 CHROMA
RV002 CONTR
RV005 BRT
RV003 PHASE
BIAS
GAIN
D001 POWER
HA (USER CONTROL, WHITE BALANSE)
VOL
POWER LED
COMP SYNC
CHROMA
APT
VP
CONTRAST
NOR/DELAY
BRT
TALLY
V(+)
V(-)
CS
PIN
H DRV
D.DCON
HP
ΔHV
H DRIVE Q801
T801 HDT
H OUT Q802
H(+)
H(-)
120V
B+
120V REG D802
15V
15V REG D803, 813
24V
24V REG D801
T802 FBT
+120V
DEGAUS D807 D808 D809
DGC SW
DGC
H1
H2
ABL
P (H OUT, FBT)

Schematic diagrams

FA G
P QA boards ➡

6-3. CIRCUIT BOARDS LOCATION



6-4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note:

- All capacitors are in μF unless otherwise noted.
  pF: μμF 50WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm Rating electrical power 1/4W

- All resistors are in ohms.
- ⊞: nonflammable resistor.
- ⏦: fusible resistor.
- △: internal component.
- ▭: panel designation.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by ⊠ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
  Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪, make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⊠ and repeat the adjustment until the specified value is achieved.
  (Refer to RV651,RV1603, and RV833 adjust on page 18 and 19.)
- When replacing the part in below table be sure to parform the related adjustment.

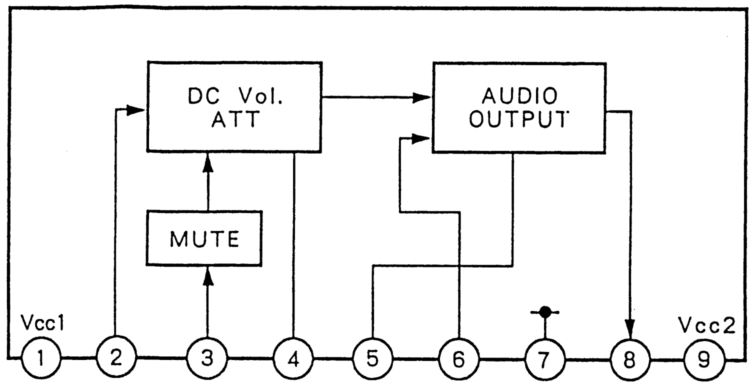
Part replaced (◪)	Adjustment (⊠)
IC601, IC651, PH601, C654, R653, R655,R656,R657,RV651	RV651 (B+ MAX)
IC502, Q833, Q834, Q835, Q836, D835, D836, C519, C814, C843, C844, C845, C846, C847, C848, RV833, R523, R850, R851,R852, R853, R854, R855, R856, R857, R858, R859, R861, R862, R863, NL801, T802	RV833 (HOLD-DOWN)

- All voltages are in V.
- Voltage are dc with respect to ground unless otherwise noted.
- Readings are taken with a color-bar signal input.
- Readings are taken with a PAL color-bar signal input.
- ▭: adjustment for repair.
- Voltage variations may be noted due to normal production tolerance.
- ▬ : B+ bus.
- ■ ■ ■ : B- bus.
- ⇛ : signal path.
- No mark : with PAL coior-bar signal received or common voltage.
- < > : with NTSC 3.58 color-bar signal received.
- (( )) : with NTSC 4.43 color-bar signal received.
- [ ] : with S (Y/C) color-bar signal received.
- ※ : measurement impossibility.

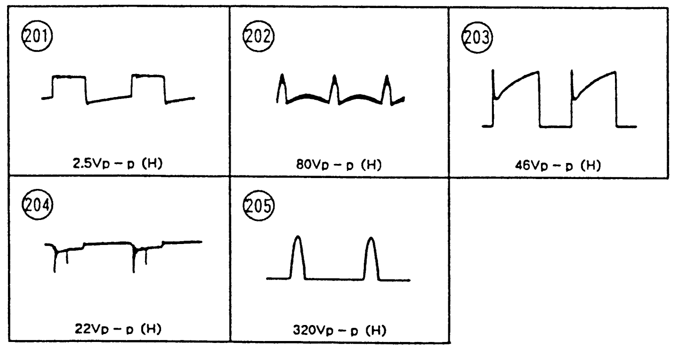
Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE WIREWOUND
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

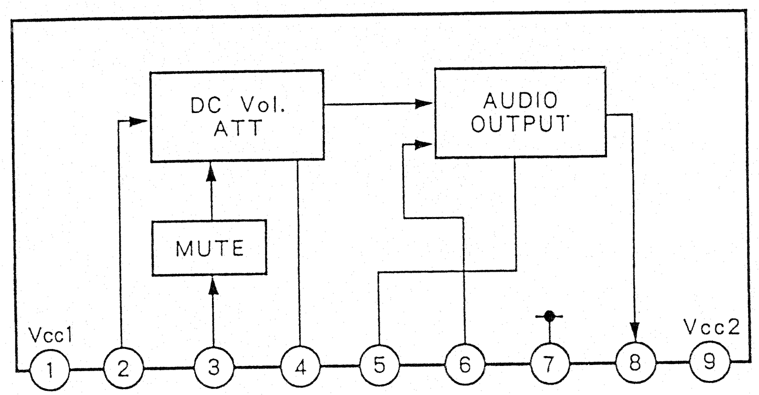
QA BOARD IC403 AN5265



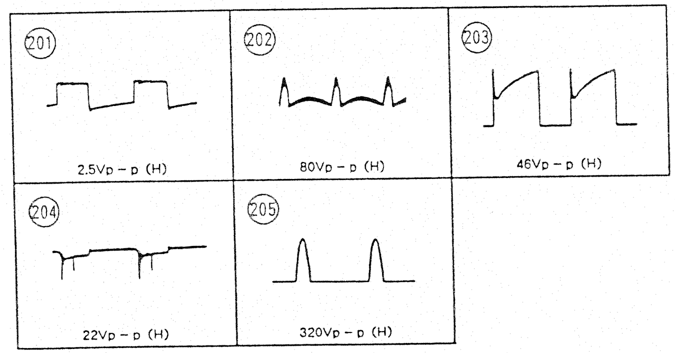
- **WAVEFORMS P BOARD**

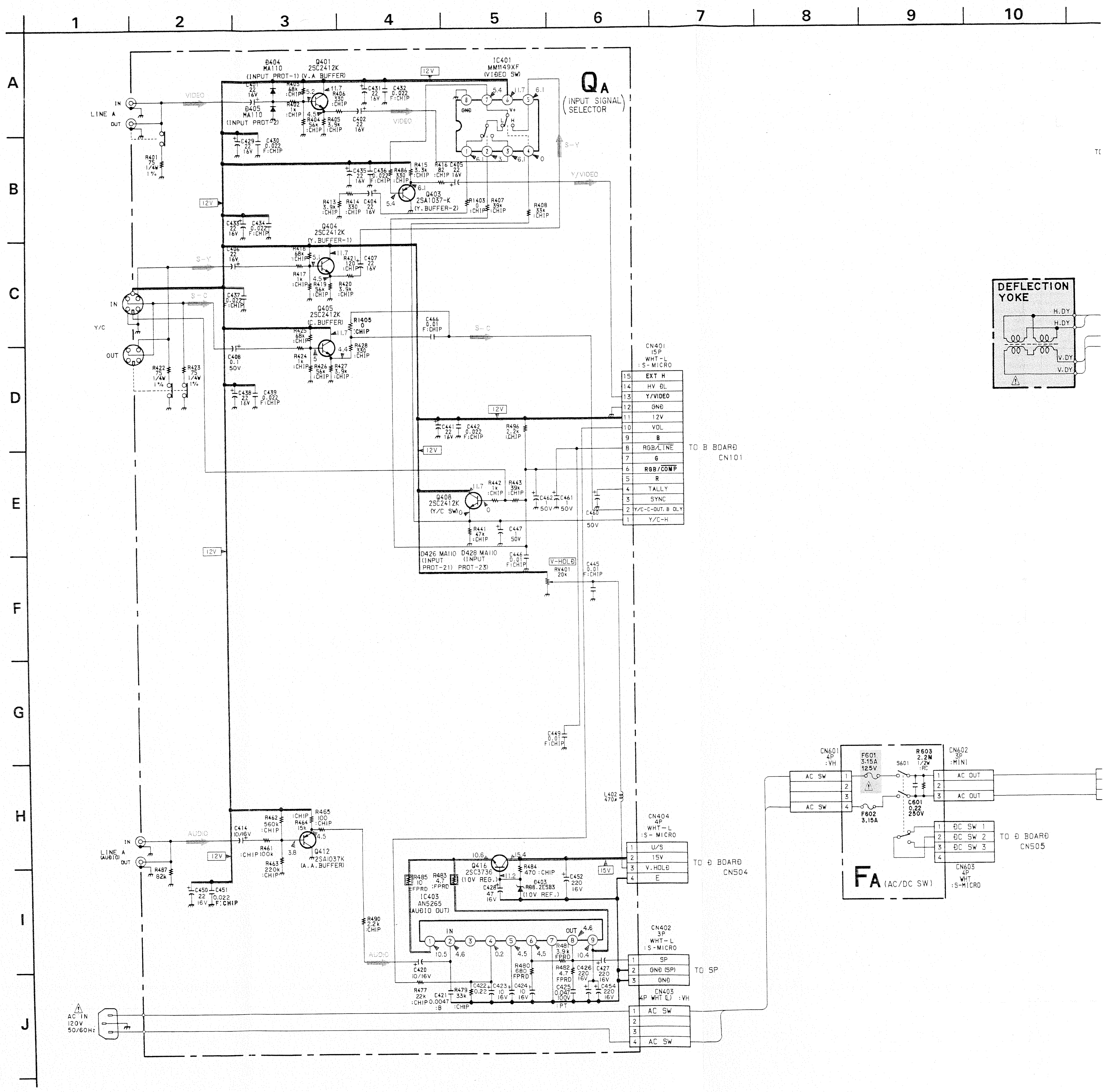


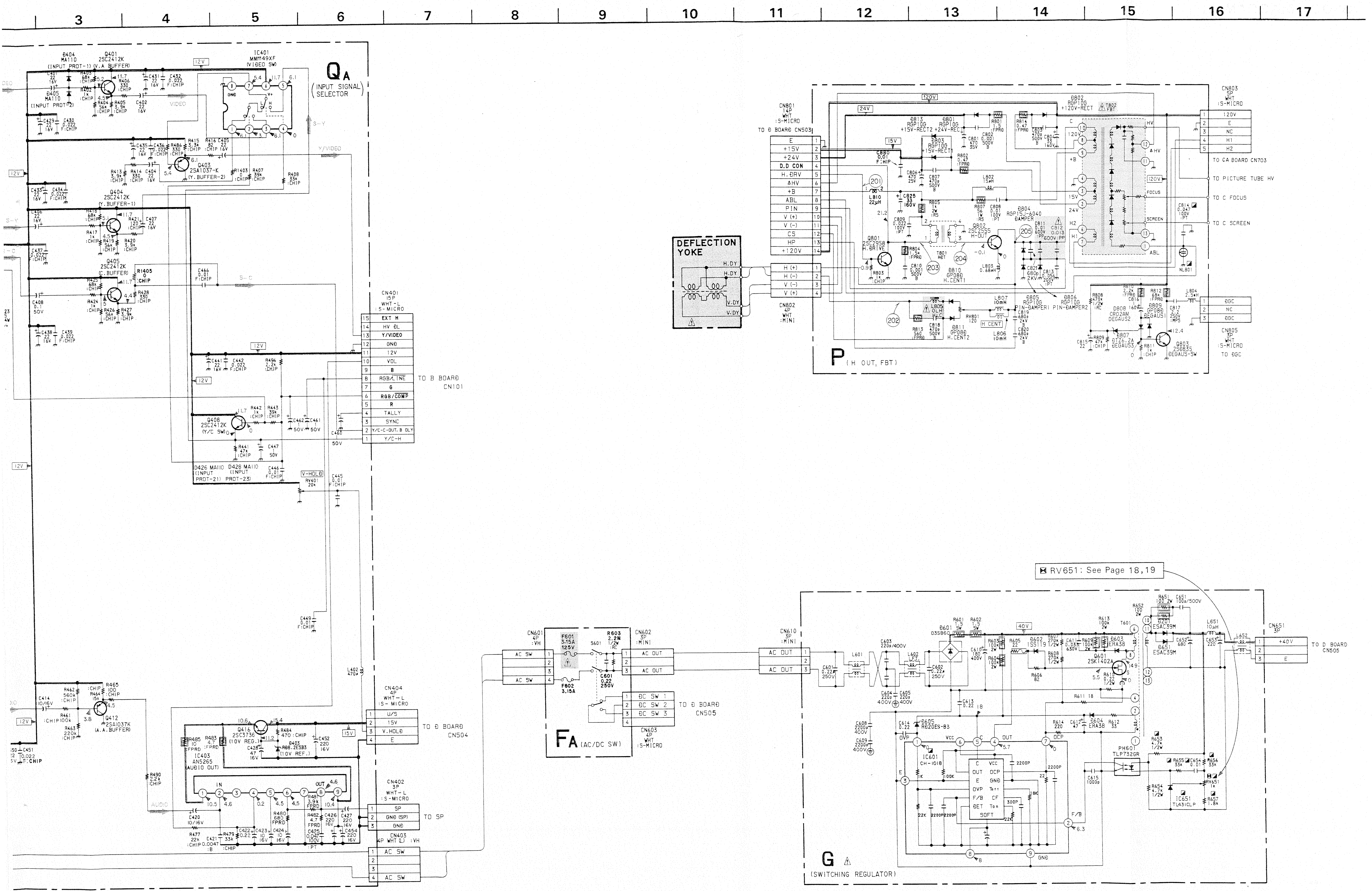
QA BOARD IC403 AN5265


DC Vol. ATT
AUDIO OUTPUT
MUTE
Vcc1
Vcc2
1
2
3
4
5
6
7
8
9

• WAVEFORMS P BOARD

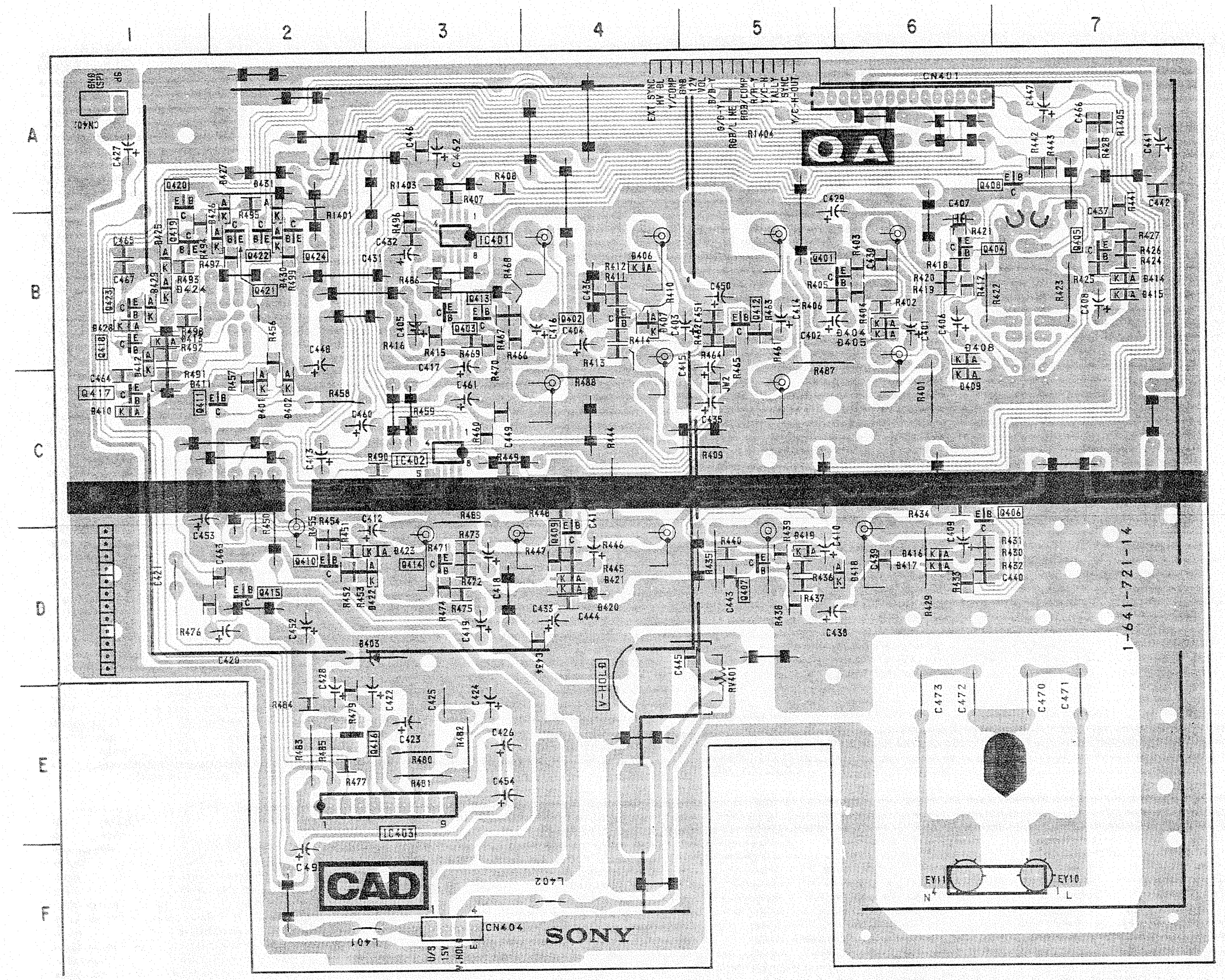



1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
QA
(INPUT SIGNAL SELECTOR)
IC401 MM1149XF (VIDEO SW)
Q401 2SC2412K (V.A BUFFER)
D404 MA110 (INPUT PROT-1)
D405 MA110 (INPUT PROT-2)
LINE A IN OUT
VIDEO
Q403 2SA1037-K (Y.BUFFER-2)
Q404 2SC2412K (Y.BUFFER-1)
Q405 2SC2412K (C.BUFFER)
Y/C IN OUT
S-Y
S-C
Y/VIDEO
12V
CN401 15P WHT-L :S-MICRO
15 EXT H
14 HV BL
13 Y/VIDEO
12 GND
11 12V
10 VOL
9 B
8 RGB/LINE
7 G
6 RGB/COMP
5 R
4 TALLY
3 SYNC
2 Y/C-C-OUT, B OLY
1 Y/C-H
TO B BOARD CN101
Q408 2SC2412K (Y/C SW)
D426 MA110 (INPUT PROT-21)
D428 MA110 (INPUT PROT-23)
V-HOLD
RV401 20k
LINE A (AUDIO) IN OUT
AUDIO
Q412 2SA1037K (A.A.BUFFER)
Q416 2SC3736 (10V REG.)
D403 RD8.2ESB3 (10V REF.)
IC403 AN5265 (AUDIO OUT)
IN
OUT
15V
CN404 4P WHT-L :S-MICRO
1 U/S
2 15V
3 V.HOLD
4 E
TO D BOARD CN504
CN402 3P WHT-L :S-MICRO
1 SP
2 GND (SP)
3 GND
TO SP
CN403 4P WHT (L) :VH
1 AC SW
2
3
4 AC SW
AC IN 120V 50/60Hz
L402 470µ
DEFLECTION YOKE
H.DY
V.DY
CN601 4P :VH
AC SW
F601 3.15A 125V
F602 3.15A
S601
R603 2.2M 1/2W :RC
C601 0.22 250V
CN602 3P :MINI
AC OUT
DC SW 1
DC SW 2
DC SW 3
TO D BOARD CN505
CN603 4P WHT :S-MICRO
FA (AC/DC SW)


3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
QA
(INPUT SIGNAL SELECTOR)
IC401 MM1149XF (VIDEO SW)
Q401 2SC2412K (V.A BUFFER)
D404 MA110 (INPUT PROT-1)
D405 MA110 (INPUT PROT-2)
Q403 2SA1037-K (Y.BUFFER-2)
Q404 2SC2412K (Y.BUFFER-1)
Q405 2SC2412K (C.BUFFER)
Q408 2SC2412K (Y/C SW)
D426 MA110 (INPUT PROT-21)
D428 MA110 (INPUT PROT-23)
V-HOLD RV401 20k
Q412 2SA1037K (A.A.BUFFER)
Q416 2SC3736 (10V REG.)
D403 RD8.2ESB3 (10V REF.)
IC403 AN5265 (AUDIO OUT)
CN401 15P WHT-L :S-MICRO
EXT H
HV DL
Y/VIDEO
GND
12V
VOL
B
RGB/LINE
G
RGB/COMP
R
TALLY
SYNC
Y/C-C-OUT, B DLY
Y/C-H
TO B BOARD CN101
CN404 4P WHT-L :S-MICRO
U/S
15V
V.HOLD
E
TO D BOARD CN504
CN402 3P WHT-L :S-MICRO
SP
GND (SP)
GND
TO SP
CN403 4P WHT (L) :VH
AC SW
AC SW
CN601 4P :VH
F601 3.15A 125V
F602 3.15A
S601
R603 2.2M 1/2W
C601 0.22 250V
CN602 3P :MINI
AC OUT
AC OUT
CN603 4P WHT :S-MICRO
DC SW 1
DC SW 2
DC SW 3
TO D BOARD CN505
FA (AC/DC SW)
DEFLECTION YOKE
H.DY
V.DY
CN801 14P WHT :S-MICRO
TO D BOARD CN503
E
+15V
+24V
D.D CON
H.DRV
ΔHV
+B
ABL
PIN
V (+)
V (-)
CS
HP
+120V
CN802 4P WHT :MINI
H (+)
H (-)
V (-)
V (+)
D802 RGP10G +120V-RECT
T802 FBT
D813 RGP10G +15V-RECT2
D801 RGP10G +24V-RECT
D803 RGP10G +15V-RECT1
Q801 2SC2958 H.DRIVE
T801 HDT
Q802 2SC2555 H-OUT
D804 RGP15J-6040 DAMPER
D810 GP08D H.CENT1
D811 GP08D H.CENT2
H CENT
D805 RGP10G PIN-DAMPER1
D806 RGP10G PIN-DAMPER2
D808 CRO2AM DEGAUS2
D809 GP08D DEGAUS1
D807 DTZ6.2A DEGAUS3
Q803 2SB835 DEGAUS-SW
NL801
CN803 5P WHT :S-MICRO
120V
E
NC
H1
H2
TO CA BOARD CN703
TO PICTURE TUBE HV
TO C FOCUS
TO C SCREEN
FOCUS
SCREEN
ABL
CN805 3P WHT :S-MICRO
DGC
NC
DGC
TO DGC
P (H OUT, FBT)
RV651: See Page 18,19
CN610 3P :MINI
AC OUT
AC OUT
D601 D3SB60
D602 1SS119
D603 ERA38
D604 ERA38
D605 RD20ES-B3
Q601 2SK1402A
IC601 CH-1018
PH601 TLP732GR
IC651 TL431CLP
RV651 1k
D651 ESAC39M
D201 ESAC39M
T601
L651 10μH
40V
CN651 3P
+40V
E
TO D BOARD CN505
G (SWITCHING REGULATOR)

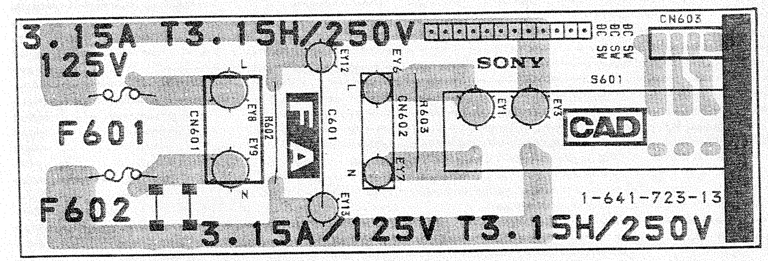
QA [INPUT SIGNAL, SELECTOR] **FA** [AC/DC SW] **G** [SWITCHING REGULATOR] **P** [H OUT, FBT]

– QA BOARD –

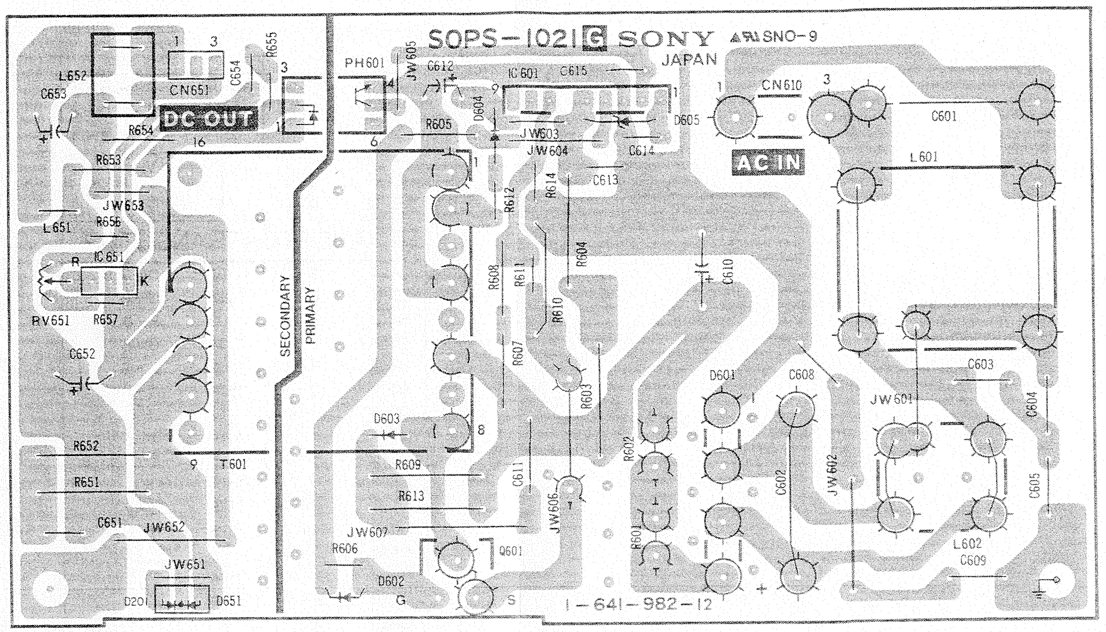

1
2
3
4
5
6
7
A
B
C
D
E
F
CN401
QA
IC401
IC402
IC403
CN404
V-HOLD
RV401
CAD
SONY
1-641-721-14

IC	
IC401	B – 3
IC403	E – 3
TRANSISTOR	
Q401	B – 5
Q403	B – 3
Q404	B – 6
Q405	B – 7
Q408	A – 7
Q412	B – 5
Q416	E – 2
DIODE	
D403	B – 1
D404	B – 6
D405	B – 6
VARIABLE RESISTOR	
RV401	D – 5

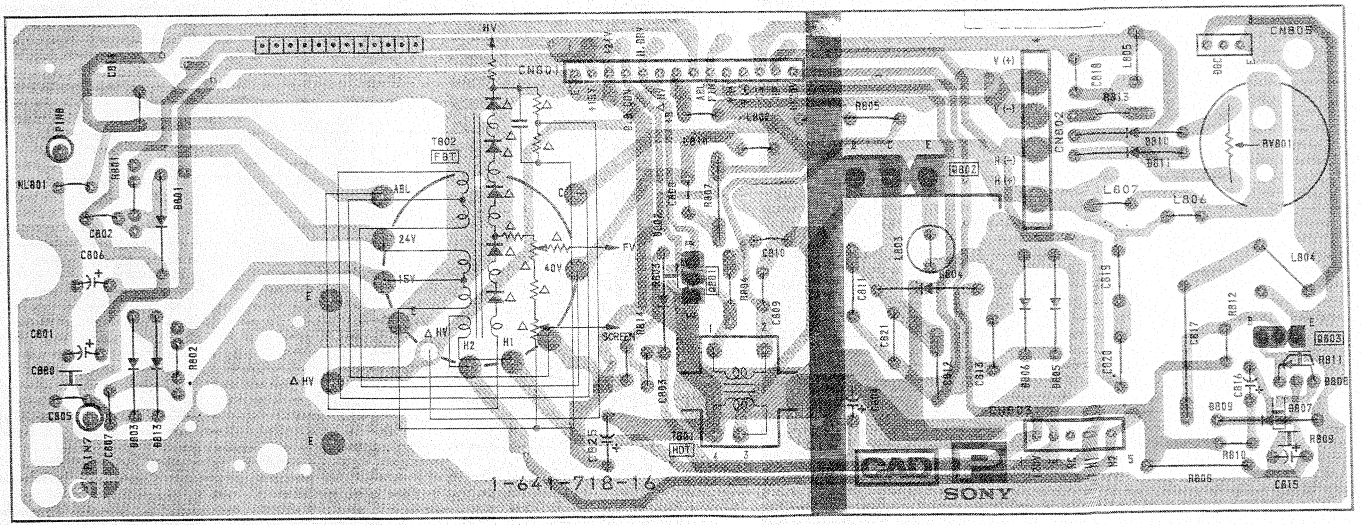
– FA BOARD –


3.15A T3.15H/250V
125V
F601
F602
3.15A/125V T3.15H/250V
CN601
CN602
CN603
S601
FA
SONY
CAD
1-641-723-13

– G BOARD –


SOPS-1021 G SONY
JAPAN
SNO-9
DC OUT
AC IN
CN651
CN610
PH601
IC601
IC651
T601
SECONDARY
PRIMARY
RV651
Q601
1-641-982-12

– P BOARD –

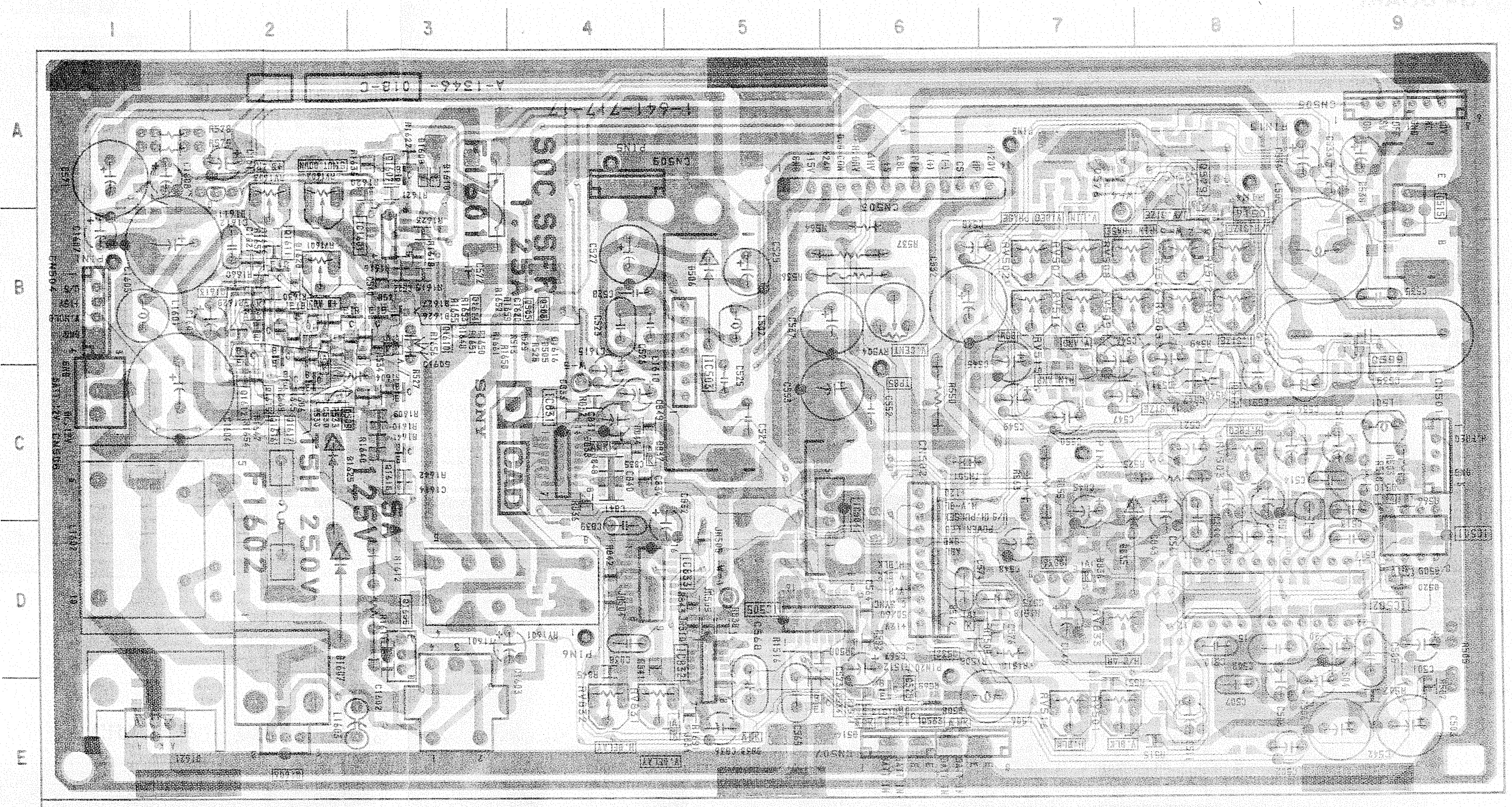

HV
CN801
CN802
CN803
CN805
FBT
T802
ABL
24V
15V
40V
SCREEN
HDT
T803
RV801
CAD
P
SONY
1-641-718-16

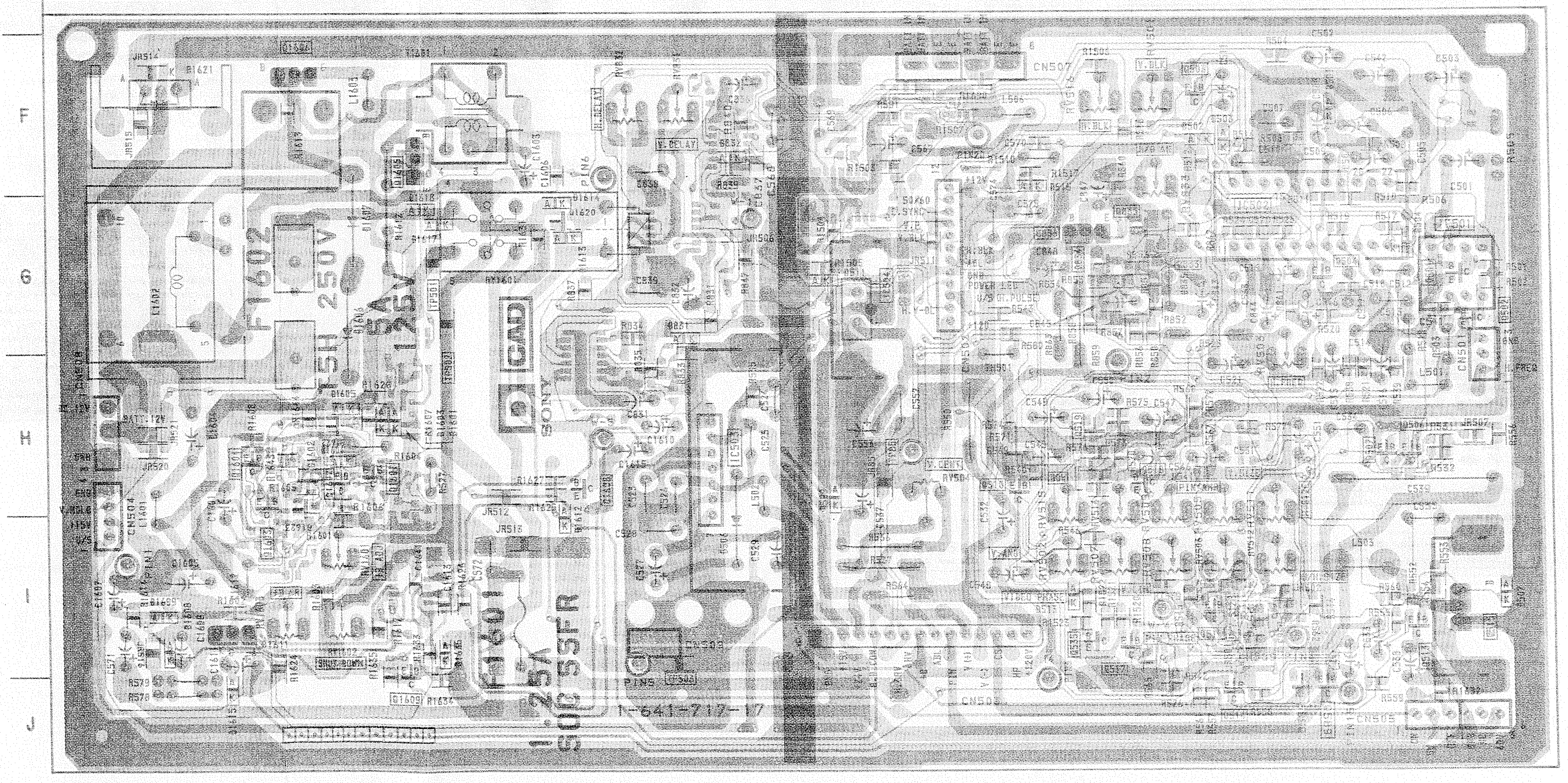
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

D [DEFLECTION SYSTEM]

– D BOARD – ⟨Component Side⟩

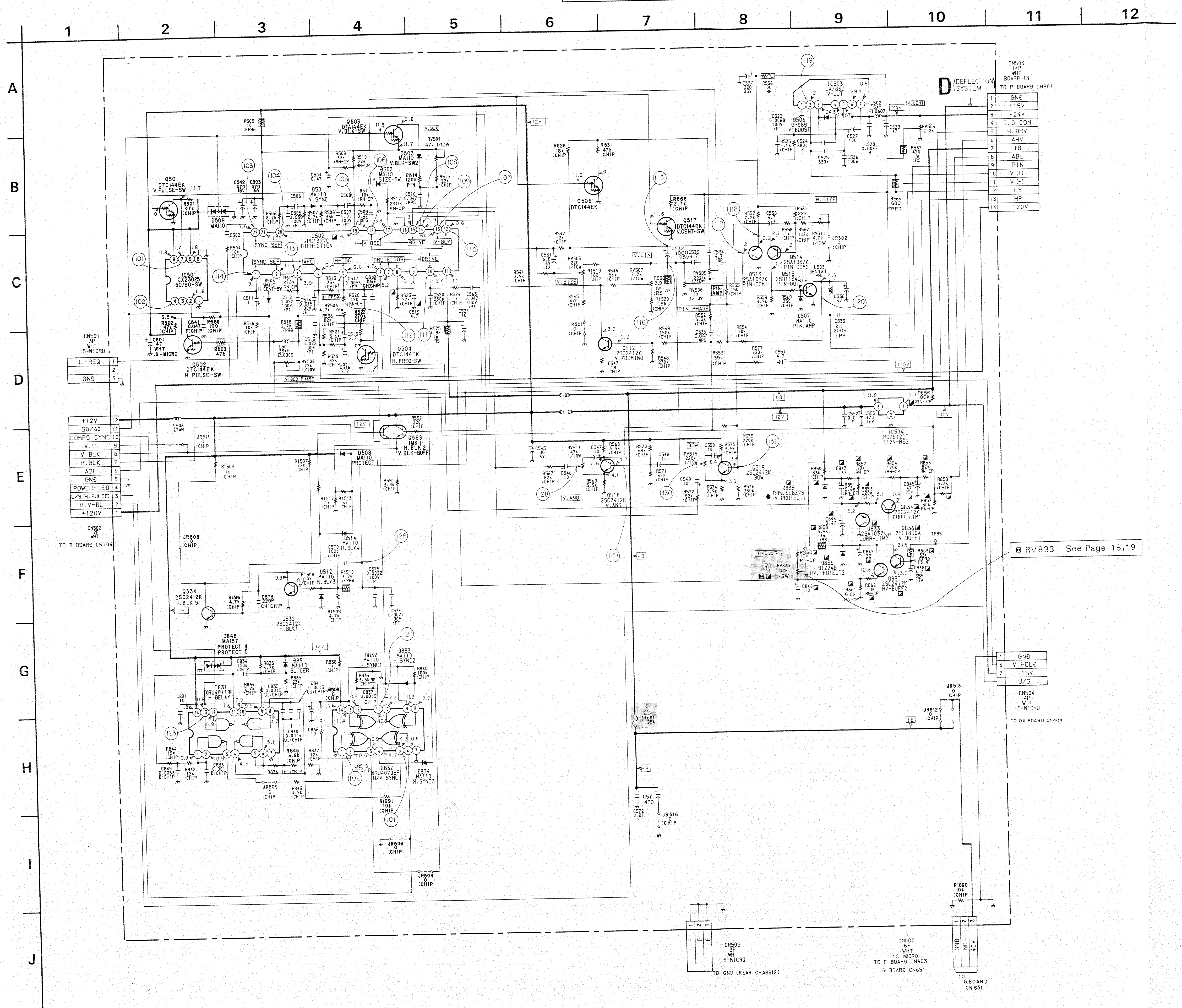
IC	
IC501	D – 9, G – 9
IC502	D – 8, G – 8
IC503	B – 5, H – 5
IC504	C – 6
IC831	C – 4
IC832	D – 5
TRANSISTOR	
Q501	G – 9
Q502	G – 9
Q503	F – 8
Q504	G – 8
Q506	H – 9
Q512	C – 8
Q513	I – 9
Q514	J – 8
Q515	B – 9, I – 9
Q517	I – 7
Q518	H – 7
Q519	H – 7
Q532	D – 6
Q534	E – 6
Q569	E – 6
Q833	G – 7
Q834	G – 7
Q835	G – 7
Q836	D – 7, G – 7
DIODE	
D501	F – 8
D502	F – 8
D503	F – 8
D504	G – 9
D506	B – 5, I – 5
D507	I – 9
D508	E – 6
D509	D – 9
D512	D – 6
D514	E – 6
D831	G – 4
D832	F – 5
D833	E – 5
D834	E – 5
D835	D – 7, G – 7
D836	D – 7
D848	C – 4
VARIABLE RESISTOR	
RV501	E – 7, F – 7
RV502	B – 7, G – 7
RV503	C – 8, F – 8
RV504	B – 6, F – 6
RV505	B – 8, I – 8
RV507	B – 7, I – 7
RV508	B – 7, I – 7
RV509	B – 7, I – 7
RV511	B – 8, I – 8
RV514	B – 7, I – 7
RV515	B – 7, I – 7
RV833	D – 7, I – 7


1
2
3
4
5
6
7
8
9
A
B
C
D
E
SOC SSFR
1.25A
F1601
F1602
5A 125V
5H 250V
SONY
D
CAD
1-641-717-17

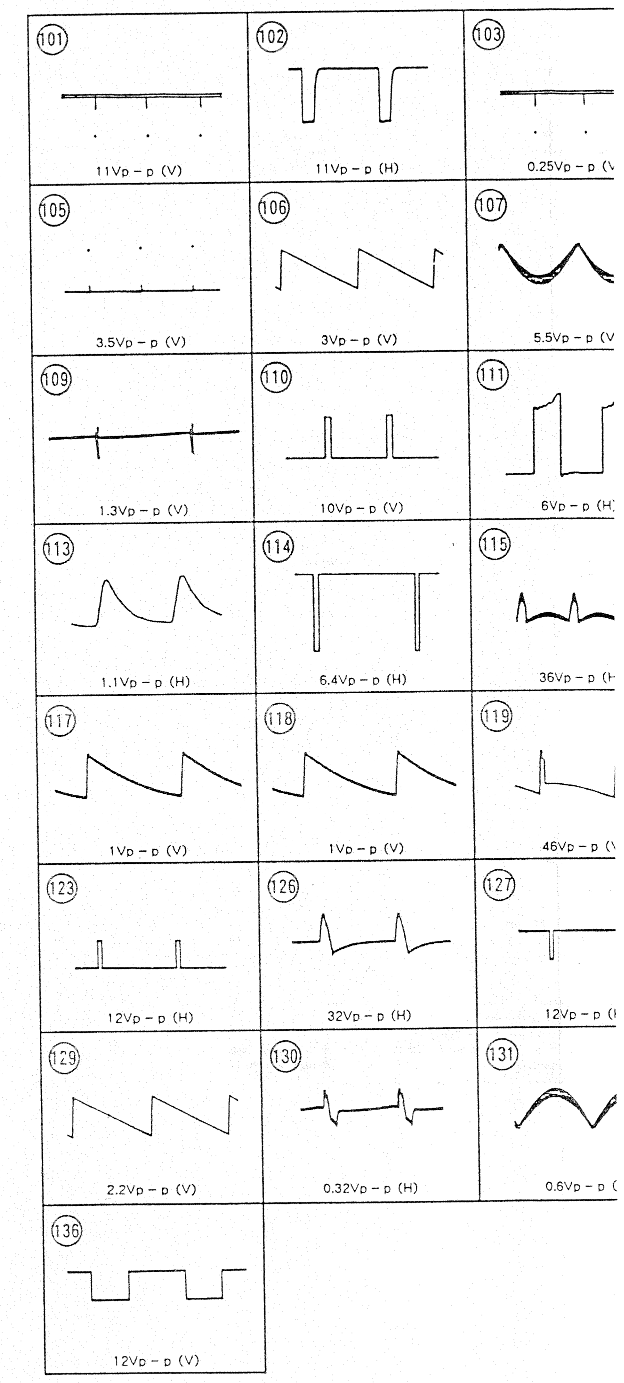

F
G
H
I
J
F1602
5H 250V
5A 125V
CAD
D
SONY
F1601
1.25A
SOC SSFR
1-641-717-17

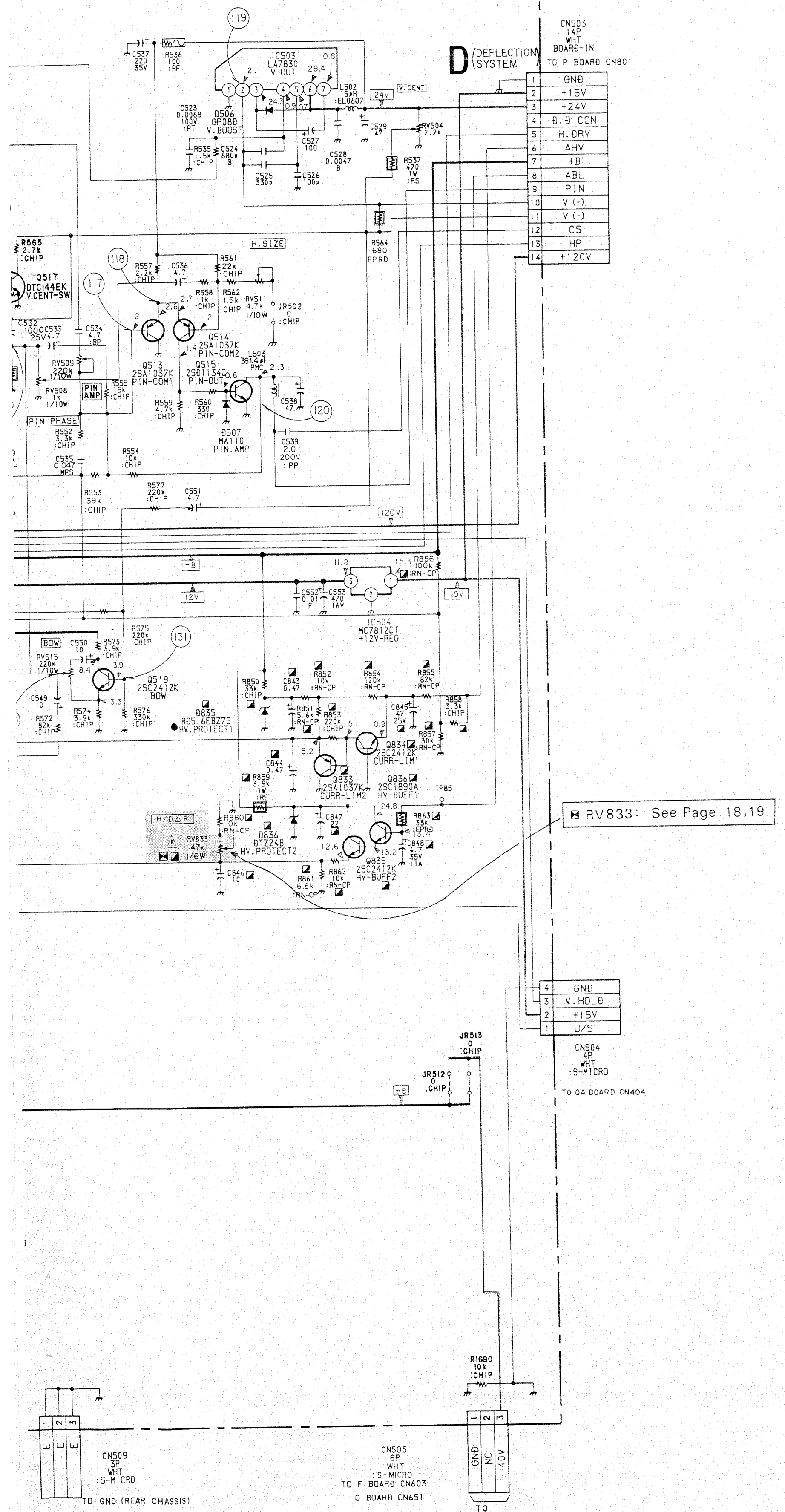
⟨Conductor Side⟩

- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

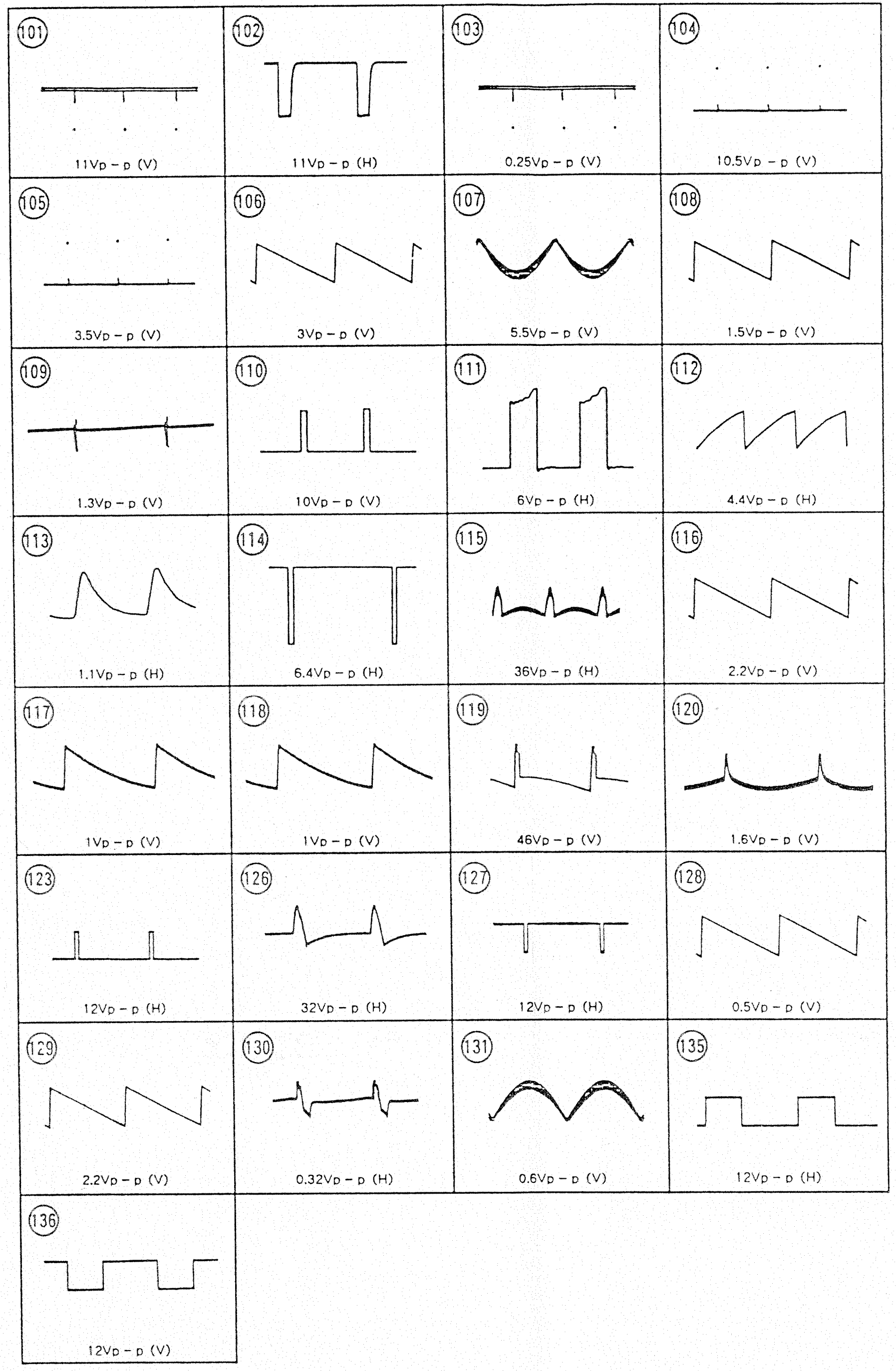

D (DEFLECTION SYSTEM)
CN503 14P WHT BOARD-IN TO P BOARD CN801
1 GND
2 +15V
3 +24V
4 0.0 CON
5 H.DRV
6 ΔHV
7 +B
8 ABL
9 PIN
10 V(+)
11 V(-)
12 CS
13 HP
14 +120V
CN501 3P WHT :S-MICRO
H.FREQ 1
GND 2
CN502 12P WHT TO B BOARD CN104
+12V 12
50/60 11
COMPO SYNC 10
V.P 9
V.BLK 8
H.BLK 7
ABL 6
GND 5
POWER LED 4
U/S (H.PULSE) 3
H.V-DL 2
+120V 1
IC501 CXA22005 50/60-SW
IC502 μPC1377C DIFFECTION
IC503 LA7830 V-OUT
IC504 MC7812CT +12V-REG
IC831 XRU4011BF H.DELAY
IC832 XRU4070BF H/V.SYNC
Q501 DTC144EK V.PULSE-SW
Q502 DTC144EK H.PULSE-SW
Q503 DTA144EK V.BLK-SW1
Q504 DTC144EK H.FREQ-SW
Q506 DTC144EK
Q507 MA110 PIN.AMP
Q512 2SC2412K V.ZOOMING
Q513 2SA1037K PIN-COM1
Q514 2SA1037K PIN-COM2
Q515 2SD1134 PIN-OUT
Q517 DTC144EK V.CENT-SW
Q518 2SC2412K V.ANG
Q519 2SC2412K BOW
Q532 2SC2412K H.BLK1
Q534 2SC2412K H.BLK 9
Q569 IMX H.BLK 2 V.BLK-BUFF
Q833 2SA1037K CURR-LIM2
Q834 2SC2412K CURR-LIM1
Q835 2SC2412K HV-BUFF2
Q836 2SC1890A HV-BUFF1
D502 MA110 V.BLK-SW2
D508 MA110 PROTECT 1
D509 MA110
D512 MA110 H.BLK3
D514 MA110 H.BLK4
D832 MA110 H.SYNC1
D833 MA110 H.SYNC2
D834 MA110 H.SYNC3
D835 MA110 SLICER
D836 DTZ24B HV.PROTECT2
D845 RD5.6ESB2 HV.PROTECT1
D848 MA157 PROTECT 4 PROTECT 5
RV501 47k 1/10W
RV502 V.SIZE-SW
RV503 H.FREQ
RV505 V.SIZE
RV507 V.LIN
RV509 PIN AMP
RV511 H.SIZE
RV514 V.ANG
RV515 BOW
RV833 47k 1/6W H/D△R
F1601 1.25A
RV833: See Page 18,19
CN504 4P WHT :S-MICRO TO QA BOARD CN404
4 GND
3 V.HOLD
2 +15V
1 U/S
CN509 3P WHT :S-MICRO TO GND (REAR CHASSIS)
CN505 6P WHT :S-MICRO TO F BOARD CN603 G BOARD CN651
GND NC 40V
TO G BOARD CN651
A B C D E F G H I J
1 2 3 4 5 6 7 8 9 10 11 12

• WAVEFORMS D BOARD

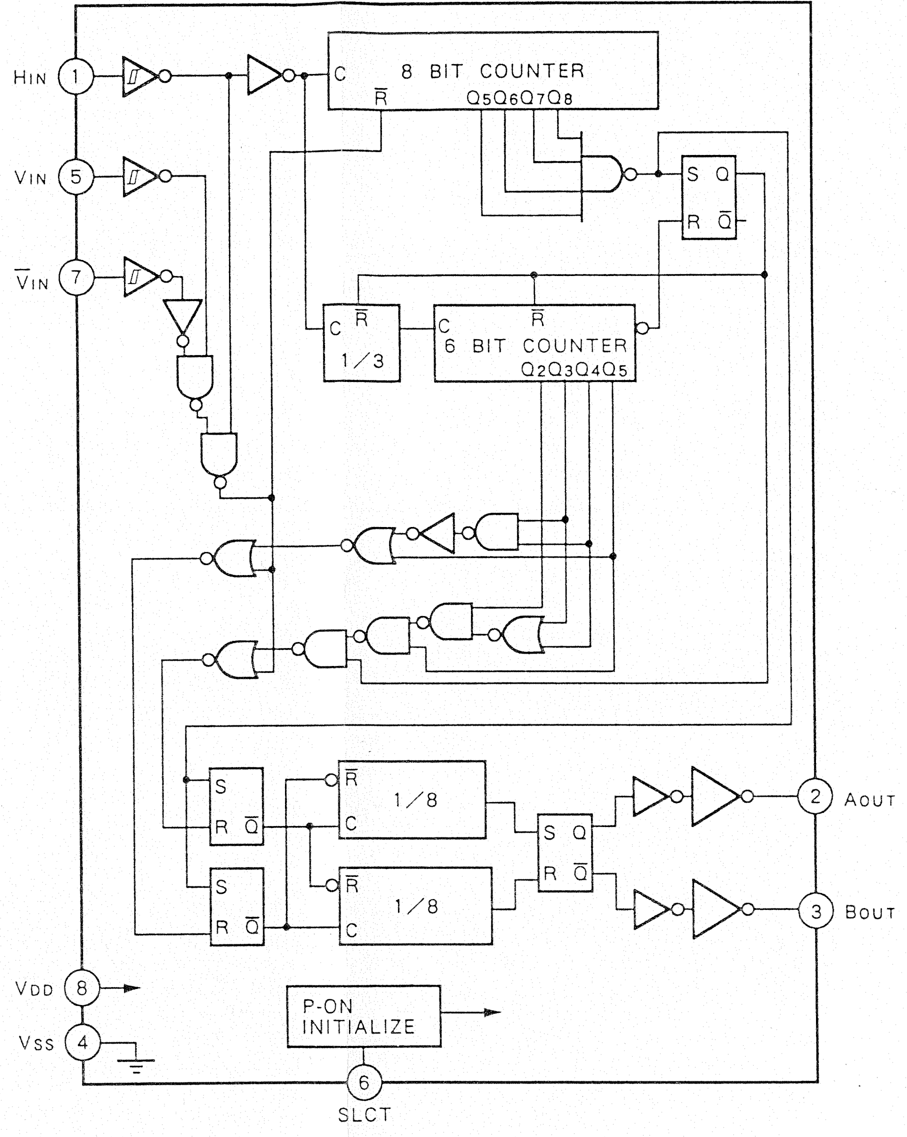



D (DEFLECTION SYSTEM)
CN503 14P WHT BOARD-IN TO P BOARD CN801
1 GND
2 +15V
3 +24V
4 D.D CON
5 H.DRV
6 ΔHV
7 +B
8 ABL
9 PIN
10 V (+)
11 V (−)
12 CS
13 HP
14 +120V
IC503 LA7830 V-OUT
H.SIZE
PIN PHASE
IC504 MC7812CT +12V-REG
H/D&R
RV833: See Page 18,19
4 GND
3 V.HOLD
2 +15V
1 U/S
CN504 4P WHT :S-MICRO
TO QA BOARD CN404
CN509 3P WHT :S-MICRO
TO GND (REAR CHASSIS)
CN505 6P WHT :S-MICRO TO F BOARD CN603 G BOARD CN651
GND NC 40V
TO G BOARD CN651

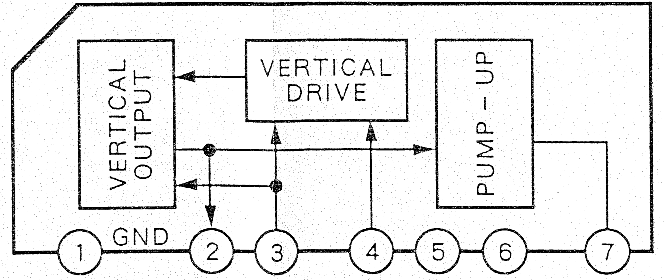
• WAVEFORMS D BOARD



D BOARD IC501 CX23025


HIN 1
VIN 5
VIN 7
8 BIT COUNTER
C
R
Q5Q6Q7Q8
S Q
R Q
C R
1/3
C R
6 BIT COUNTER
Q2Q3Q4Q5
S
R Q
R
1/8
C
S Q
R Q
S
R Q
R
1/8
C
2 AOUT
3 BOUT
VDD 8
VSS 4
P-ON INITIALIZE
6 SLCT

D BOARD IC503 LA7830

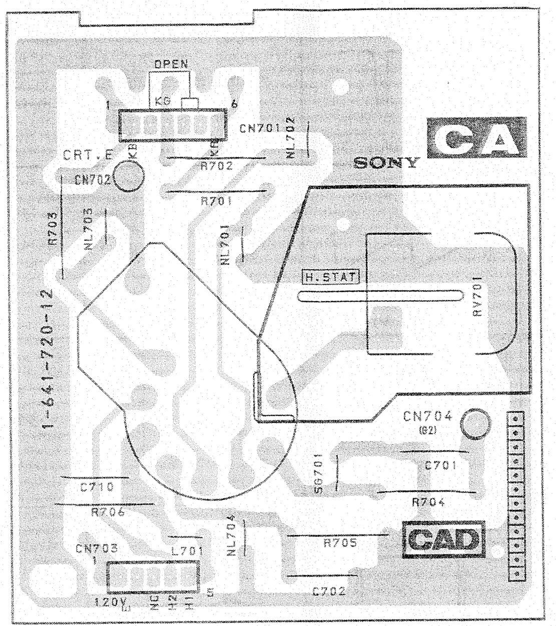

VERTICAL OUTPUT
VERTICAL DRIVE
PUMP - UP
1 GND
2
3
4
5
6
7

Schematic diagram

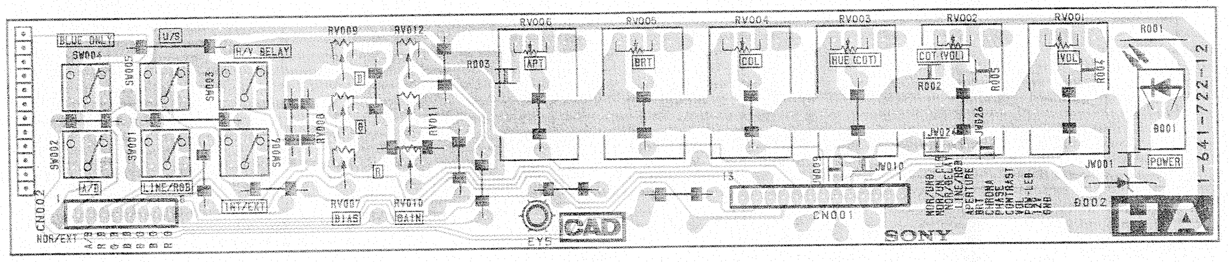
← D board

CA [CRT SOCKET] HA [USER CONTROL WHITE BALANCE] B [SIGNAL PROCESS]

– CA BOARD –


OPEN
KG
CN701
CRT.E
CN702
R702
R701
R703
NL703
NL701
NL702
SONY
CA
H.STAT
RV701
1-641-720-12
CN704
C701
R704
SG701
C710
R706
CN703
L701
NL704
R705
CAD
C702
120V

– HA BOARD –


BLUE ONLY
U/S
H/V DELAY
RV009
RV012
RV006
RV005
RV004
RV003
RV002
RV001
R001
APT
BRT
COL
HUE CONT
CONT (VOL)
VOL
SW004
SW005
SW003
SW002
SW001
SW006
RV008
RV011
R002
B001
POWER
1-641-722-12
A/B
LINE/RGB
INT/EXT
RV007
BIAS
RV010
GAIN
CN002
CN001
EYS
CAD
SONY
HA

IC	
IC102	D – 6
IC103	D – 5
IC104	C – 6
IC107	C – 1
IC109	B – 1
IC110	D – 7
IC111	C – 7
IC112	D – 8, F – 8
IC113	D – 9
IC114	D – 8
IC115	C – 9
IC116	B – 7
IC119	D – 3
IC123	C – 3
IC124	B – 6, H – 6
IC128	C – 8
IC129	B – 3

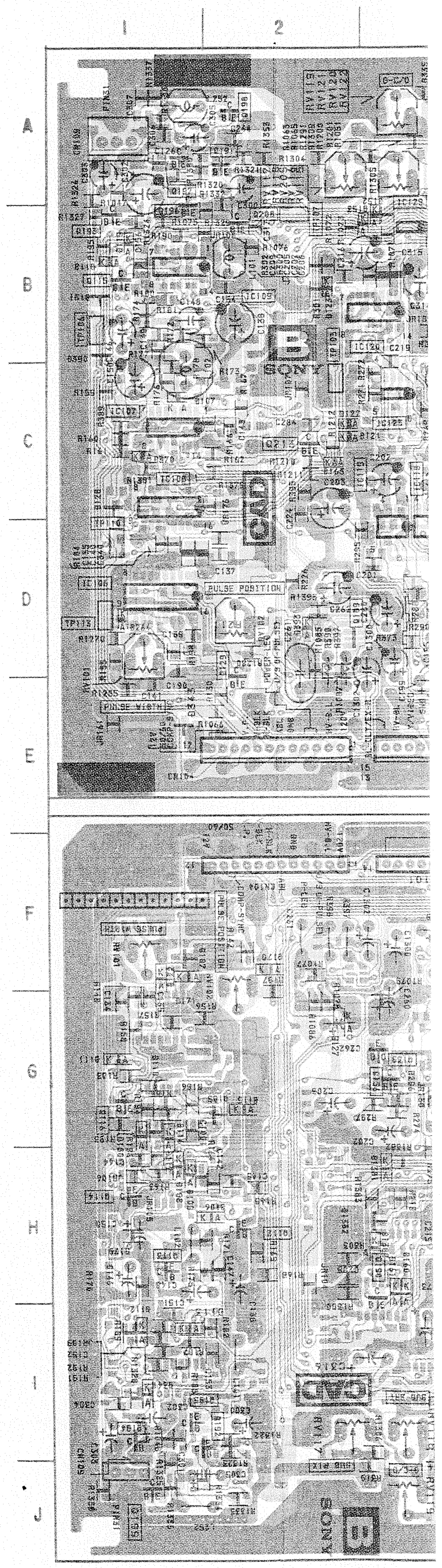
TRANSISTOR	
Q101	D – 4
Q102	G – 4
Q103	H – 4
Q104	D – 6
Q105	G – 5
Q107	H – 6
Q108	G – 6
Q112	H – 2
Q115	B – 1
Q117	G – 8
Q118	G – 8
Q119	D – 7
Q120	G – 7
Q121	C – 8
Q122	G – 8
Q123	G – 7
Q124	D – 7
Q125	F – 9
Q126	F – 8
Q127	F – 8
Q128	F – 8
Q130	F – 7
Q131	F – 9
Q133	F – 9
Q134	G – 8
Q135	G – 8
Q138	D – 3
Q140	H – 3
Q141	B – 4
Q142	I – 4
Q144	J – 6
Q146	A – 8
Q147	C – 8, H – 8
Q148	J – 9
Q149	A – 9, J – 9
Q150	E – 5
Q151	I – 9
Q152	B – 9, I – 9
Q153	I – 6
Q154	I – 9
Q155	B – 9, I – 9
Q156	G – 3
Q157	A – 8, J – 8
Q158	B – 8, I – 8
Q159	B – 8, I – 8
Q160	J – 8
Q161	I – 8
Q165	H – 7
Q166	B – 8
Q167	I – 7
Q169	B – 5
Q171	D – 6
Q173	H – 8
Q174	I – 8
Q175	I – 8
Q176	D – 6
Q189	D – 2
Q191	A – 2
Q192	I – 1
Q193	B – 1
Q194	I – 1
Q195	I – 1
Q196	B – 1
Q197	A – 1
Q199	J – 1
Q204	A – 6
Q205	A – 6
Q206	A – 5
Q208	B – 2
Q209	A – 9, J – 9
Q210	B – 9, I – 9
Q211	B – 9, I – 9
Q213	C – 2
Q299	A – 7

DIODE	
D103	D – 5
D104	G – 4
D106	H – 1
D107	C – 1
D118	B – 1
D120	F – 8
D123	B – 2
D127	G – 2
D129	F – 9
D130	A – 8
D131	B – 8
D132	B – 9
D133	I – 6
D134	I – 6
D135	I – 6
D136	H – 8
D137	E – 7
D138	C – 8
D141	B – 6
D144	H – 8
D145	H – 8
D146	B – 8
D148	I – 8
D149	I – 8
D150	H – 8
D151	B – 3
D152	B – 3
D153	B – 2
D154	A – 8
D155	I – 8
D156	B – 8
D157	A – 8
D158	I – 9
D159	I – 9
D163	C – 2
D180	G – 1
D186	G – 6
D191	B – 1
D285	H – 3
D341	I – 1
D342	C – 7
D343	E – 1
D345.	A – 9
D346	A – 9
D347	B – 9
D348	A – 9
D349	B – 9
D350	B – 9
D390	B – 1

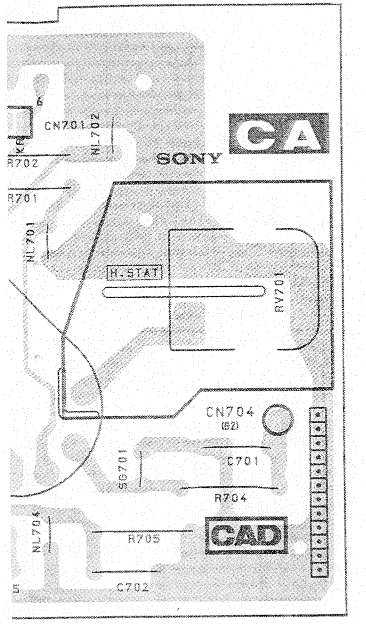
VARIABLE RESISTOR	
RV103	C – 7, G – 7
RV104	D – 8, G – 8
RV105	E – 7, F – 7
RV106	E – 8, F – 8
RV107	D – 7, F – 7
RV108	C – 9, H – 9
RV109	D – 9, G – 9
RV110	C – 9, G – 9
RV111	C – 9, H – 9
RV112	C – 9, G – 9
RV113	D – 8, G – 8
RV114	C – 9, G – 9
RV115	A – 4, I – 4
RV118	A – 3, I – 3
RV119	A – 3, J – 3
RV120	A – 3, J – 3
RV121	A – 3, J – 3
RV122	A – 4, J – 4
RV205	A – 3, I – 3

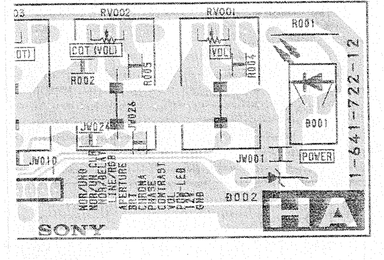
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

– B BOARD – ⟨Component Side⟩


1
2
A
B
C
D
E
F
G
H
I
J
B
SONY
CAD
PULSE POSITION
PULSE WIDTH

⟨Conductor Side⟩


CN701
CA
SONY
H.STAT
RV701
CN704
C701
R704
R705
CAD
C702
S0701
NL701
NL702
NL704
R701
R702


RV002
RV001
COT(VOL)
VOL
R001
R002
JW001
B002
B001
POWER
1-641-722-12
HA
SONY

IC	
IC102	D－6
IC103	D－5
IC104	C－6
IC107	C－1
IC109	B－1
IC110	D－7
IC111	C－7
IC112	D－8, F－8
IC113	D－9
IC114	D－8
IC115	C－9
IC116	B－7
IC119	D－3
IC123	C－3
IC124	B－6, H－6
IC128	C－8
IC129	B－3

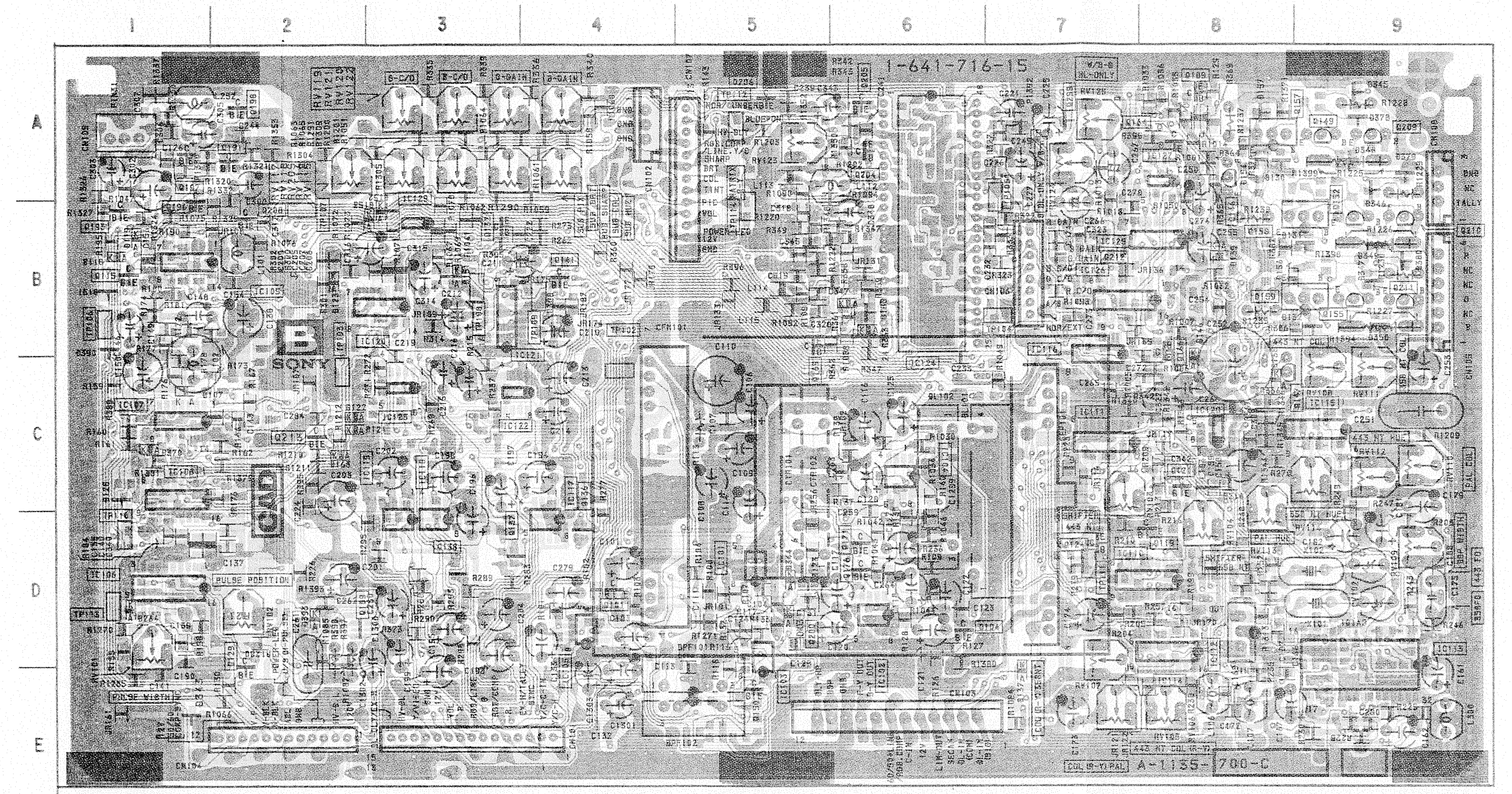
TRANSISTOR	
Q101	D－4
Q102	G－4
Q103	H－4
Q104	D－6
Q105	G－5
Q107	H－6
Q108	G－6
Q112	H－2
Q115	B－1
Q117	G－8
Q118	G－8
Q119	D－7
Q120	G－7
Q121	C－8
Q122	G－8
Q123	G－7
Q124	D－7
Q125	F－9
Q126	F－8
Q127	F－8
Q128	F－8
Q130	F－7
Q131	F－9
Q133	F－9
Q134	G－8
Q135	G－8
Q138	D－3
Q140	H－3
Q141	B－4
Q142	I－4
Q144	J－6
Q146	A－8
Q147	C－8, H－8
Q148	J－9
Q149	A－9, J－9
Q150	E－5
Q151	I－9
Q152	B－9, I－9
Q153	I－6
Q154	I－9
Q155	B－9, I－9
Q156	G－3
Q157	A－8, J－8
Q158	B－8, I－8
Q159	B－8, I－8
Q160	J－8
Q161	I－8
Q165	H－7
Q166	B－8
Q167	I－7
Q169	B－5
Q171	D－6
Q173	H－8
Q174	I－8
Q175	I－8
Q176	D－6
Q189	D－2
Q191	A－2
Q192	I－1
Q193	B－1
Q194	I－1
Q195	I－1
Q196	B－1
Q197	A－1
Q199	J－1
Q204	A－6
Q205	A－6
Q206	A－5
Q208	B－2
Q209	A－9, J－9
Q210	B－9, I－9
Q211	B－9, I－9
Q213	C－2
Q299	A－7

DIODE	
D103	D－5
D104	G－4
D106	H－1
D107	C－1
D118	B－1
D120	F－8
D123	B－2
D127	G－2
D129	F－9
D130	A－8
D131	B－8
D132	B－9
D133	I－6
D134	I－6
D135	I－6
D136	H－8
D137	E－7
D138	C－8
D141	B－6
D144	H－8
D145	H－8
D146	B－8
D148	I－8
D149	I－8
D150	H－8
D151	B－3
D152	B－3
D153	B－2
D154	A－8
D155	I－8
D156	B－8
D157	A－8
D158	I－9
D159	I－9
D163	C－2
D180	G－1
D186	G－6
D191	B－1
D285	H－3
D341	I－1
D342	C－7
D343	E－1
D345.	A－9
D346	A－9
D347	B－9
D348	A－9
D349	B－9
D350	B－9
D390	B－1

VARIABLE RESISTOR	
RV103	C－7, G－7
RV104	D－8, G－8
RV105	E－7, F－7
RV106	E－8, F－8
RV107	D－7, F－7
RV108	C－9, H－9
RV109	D－9, G－9
RV110	C－9, G－9
RV111	C－9, H－9
RV112	C－9, G－9
RV113	D－8, G－8
RV114	C－9, G－9
RV115	A－4, I－4
RV118	A－3, I－3
RV119	A－3, J－3
RV120	A－3, J－3
RV121	A－3, J－3
RV122	A－4, J－4
RV205	A－3, I－3

- ░ : Pattern from the side which enables seeing.
- ▓ : Pattern of the rear side.

– B BOARD – 〈Component Side〉


1
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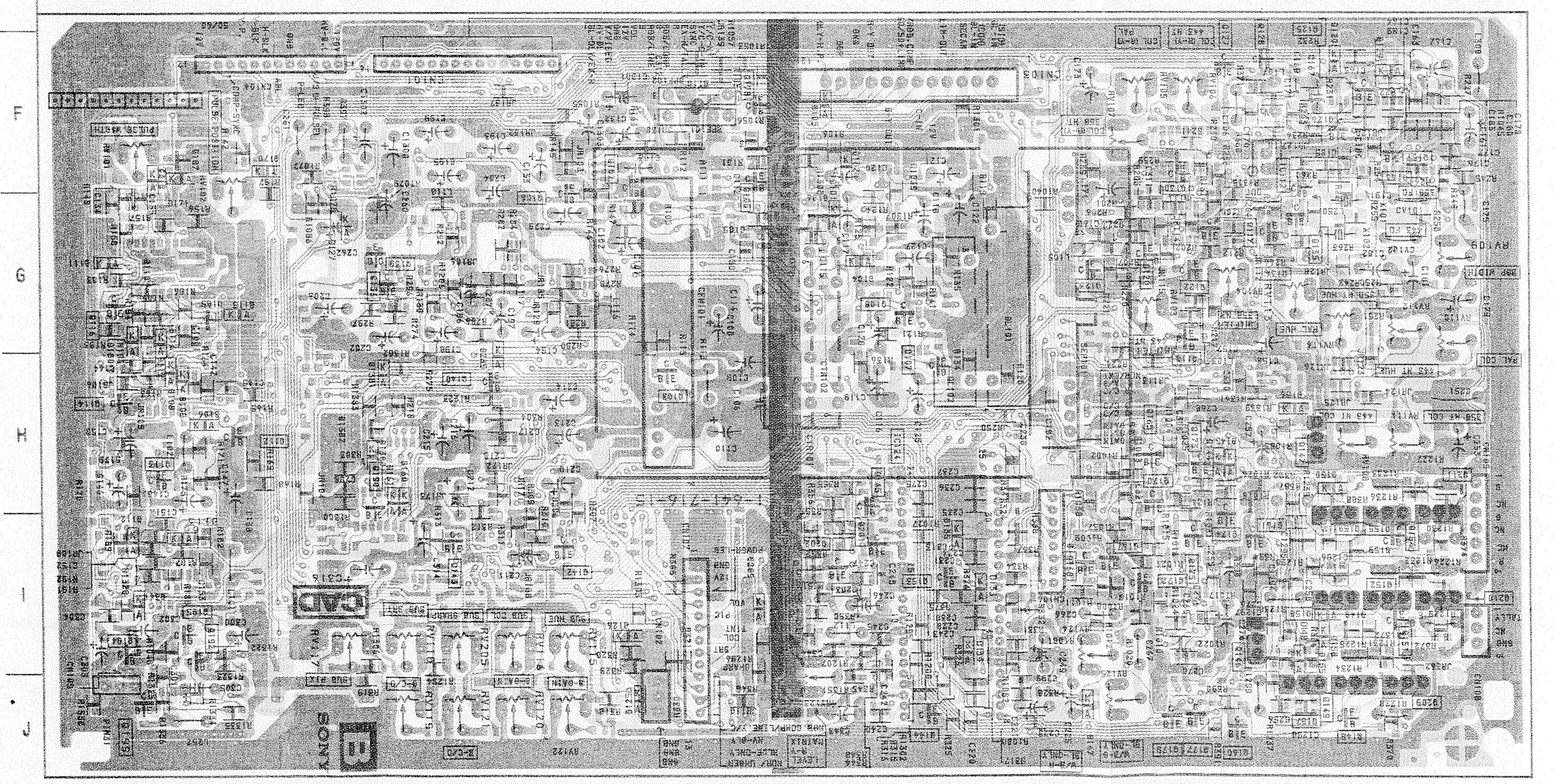
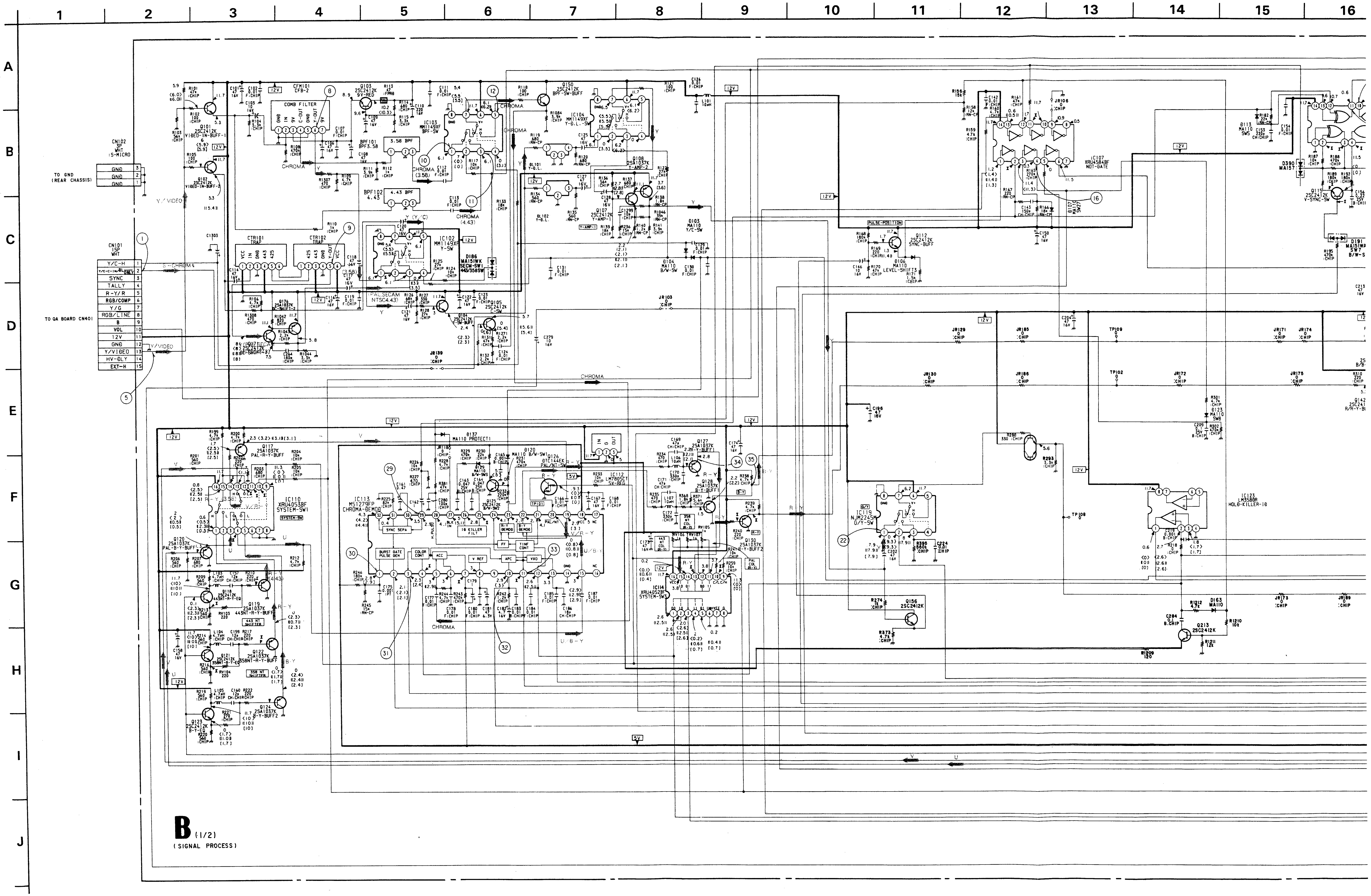
9
A
B
C
D
E
1-641-716-15
B
SONY
CAD
A-1155-700-C


F
G
H
I
J
B
SONY
CAD
1-641-716-15

〈Conductor Side〉


1
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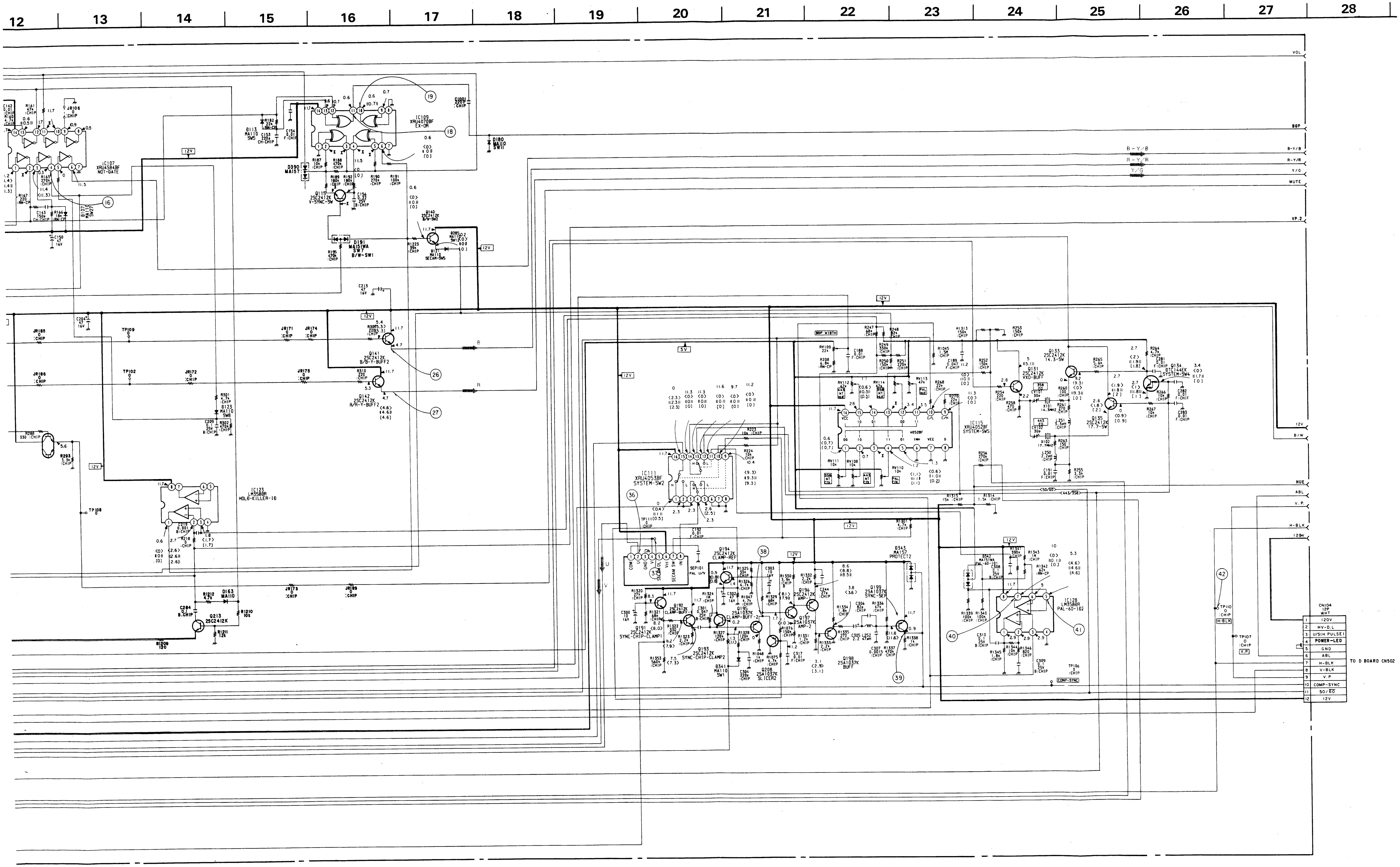
16
A
B
C
D
E
F
G
H
I
J
CN102 3P WHT :S-MICRO
TO GND (REAR CHASSIS)
GND
CN101 15P WHT
Y/C-H
SYNC
TALLY
R-Y/R
RGB/COMP
Y/G
RGB/LINE
B
VOL
12V
GND
Y/VIDEO
HV-DLY
EXT-H
TO QA BOARD CN401
Q101 2SC2412K VIDEO-IN-BUFF-1
Q102 2SC2412K VIDEO-IN-BUFF-2
CFM101 CFB-2
COMB FILTER
Q103 2SC2412K 9V-REG
BPF101 BPF3.58
3.58 BPF
BPF102 4.43
4.43 BPF
IC103 MM1149XF BPF-SW
CHROMA
Q150 2SC2412K BPF-SW-BUFF
IC104 MM1149XF Y-D.L.-SW
DL101 Y-D.L.
DL102 Y-B.L.
Q106 2SA1037K Y-AMP-2
Q107 2SC2412K Y-AMP-1
D103 MA110 Y/C-SW
D104 MA110 B/W-SW
CTR101 TRAP
CTR102 TRAP
IC102 MM1149XF Y-SW
D186 MA151WK SECM-SW1 443/358SW
PAL.SECAM NTSC4.43
Q104 2SC2412K Y-SW-BUFF
Q105 2SC2412K C-SW
Q112 2SC2412K SYNC-BUFF
D106 MA110 LEVEL-SHIFT3
PULSE-POSITION
IC107 XRU4584BF NOT-GATE
D107 MA110 SW27
Q113 MA110 SW5
D390 MA157
Q115 2SC2412K V-SYNC-SW
D191 MA151WA SW7 B/W-SW
Q117 2SA1037K PAL-R-Y-BUFF
IC110 XRU4053BF SYSTEM-SW1
Q120 2SA1037K PAL-B-Y-BUFF
Q118 2SC2412K 443NT-R-Y-EQ
Q119 2SA1037K 443NT-R-Y-BUFF
Q121 2SC2412K 358NT-R-Y-EQ
Q122 2SA1037K 358NT-R-Y-BUFF
443 NT SHIFTER
358 NT SHIFTER
Q123 2SC2412K B-Y-EQ
Q124 2SA1037K B-Y-BUFF2
D137 MA110 PROTECT1
IC113 M51279FP CHROMA-DEMOR
SYNC SEPA
BURST GATE PULSE GEN
COLOR CONT
ACC
V REF
APC
VXO
16 KILLER FILT
R-Y DEMOD
B-Y DEMOD
FF
TINT CONT
D120 MA110 B/W-SW1
Q125 2SC2412K B/W-SW2
Q126 DTC144EK PAL/NT-SW
IC112 LM78O5CT 5V-REG
Q127 2SA1037K R-Y-BUFF1
Q128 2SA1037K B-Y-BUFF1
Q129 2SA1037K R-Y-BUFF2
Q130 2SA1037K B-Y-BUFF2
IC114 XRU4052BF SYSTEM-SW3
PAL COL
IC119 NJM2245M G/Y-SW
Q156 2SC2412K
IC123 LM358DR HOLD-KILLER-10
Q213 2SC2412K
D163 MA110
D123 MA110 SW8
Q142 2SC241 R/R-Y-BU
12V
5V
U-B-Y
V/R-Y
U/B-Y
R-Y
B-Y
Y (Y/C)
Y/VIDEO
S-CHROMA
SYSTEM-SW
TP101
TP102
TP108
TP109

B (1/2)
(SIGNAL PROCESS)


12
13
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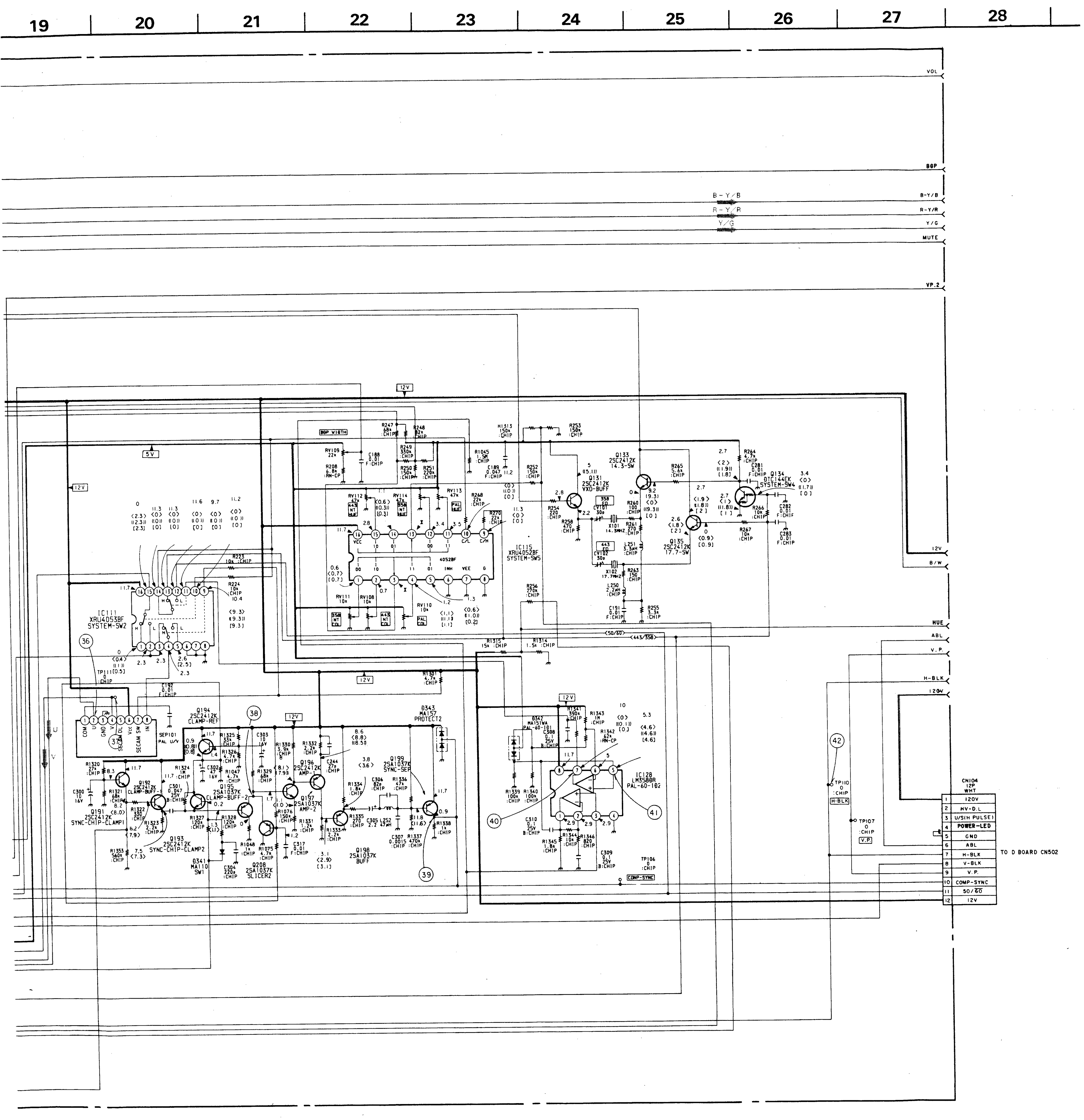
27
28
IC107 XRU4584BF NOT-GATE
IC109 XRU4070BF EX-OR
Q115 2SC2412K V-SYNC-SW
D191 MA151WA SW7 B/W-SW1
Q140 2SC2412K B/W-SW2
Q141 2SC2412K B/B-Y-BUFF2
Q142 2SC2412K R/R-Y-BUFF2
IC123 LM358OR HOLD-KILLER-10
Q213 2SC2412K
IC111 XRU4053BF SYSTEM-SW2
SEP101 PAL U/V
Q191 2SC2412K SYNC-CHIP-CLAMP1
Q192 2SC2412K CLAMP-BUFF-1
Q193 2SC2412K SYNC-CHIP-CLAMP2
Q194 2SC2412K CLAMP-REF
Q195 2SA1037K CLAMP-BUFF-2
Q196 2SC2412K AMP-2
Q197 2SA1037K AMP-1
Q198 2SA1037K BUFF
Q199 2SA1037K SYNC-SEP
Q208 2SA1037K SLICER2
D343 MA157 PROTECT2
IC115 XRU4052BF SYSTEM-SW5
Q131 2SC2412K VXO-BUFF
Q133 2SC2412K 14.3-SW
Q134 DTC144EK SYSTEM-SW4
Q135 2SC2412K 17.7-SW
IC128 LM358OR PAL-60-102
BGP WIDTH
12V
5V
B
R
U
V
VOL
BGP
B-Y/B
R-Y/R
Y/G
MUTE
VP.2
12V
B/W
HUE
ABL
V.P
H-BLK
120V
COMP-SYNC
CN104 12P WHT
1 120V
2 HV-O.L
3 U/S(H PULSE)
4 POWER-LED
5 GND
6 ABL
7 H-BLK
8 V-BLK
9 V.P
10 COMP-SYNC
11 50/60
12 12V
TO D BOARD CN502


19
20
21
22
23
24
25
26
27
28
VOL
BBP
B-Y/B
R-Y/R
Y/G
MUTE
VP.2
12V
B/W
HUE
ABL
V.P
H-BLK
120V
IC111
XRU4053BF
SYSTEM-SW2
IC115
XRU4052BF
SYSTEM-SW5
IC128
LM358BR
PAL-60-1B2
Q131 2SC2412K VXO-BUFF
Q133 2SC2412K 14.3-SW
Q134 DTC144EK SYSTEM-SW4
Q135 2SC2412K 17.7-SW
Q191 2SC2412K SYNC-CHIP-CLAMP1
Q192
Q193 2SC2412K SYNC-CHIP-CLAMP2
Q194 2SC2412K CLAMP-REF
Q195 2SA1037K CLAMP-BUFF-2
Q196 2SC2412K AMP-1
Q197 2SA1037K AMP-2
Q198 2SA1037K BUFF
Q199 2SA1037K SYNC-SEP
Q208 2SA1037K SLICER2
D341 MA110 SW1
D343 MA157 PROTECT2
SEP101 PAL U/V
TP110 H-BLK
TP107 V.P
TP106 COMP-SYNC
CN104 12P WHT
1 120V
2 HV-D.L
3 W/SIH PULSE)
4 POWER-LED
5 GND
6 ABL
7 H-BLK
8 V-BLK
9 V.P
10 COMP-SYNC
11 50/60
12 12V
TO D BOARD CN502
36
37
38
39
40
41
42

B BOARD

⁎ 〈TRANSISTOR〉

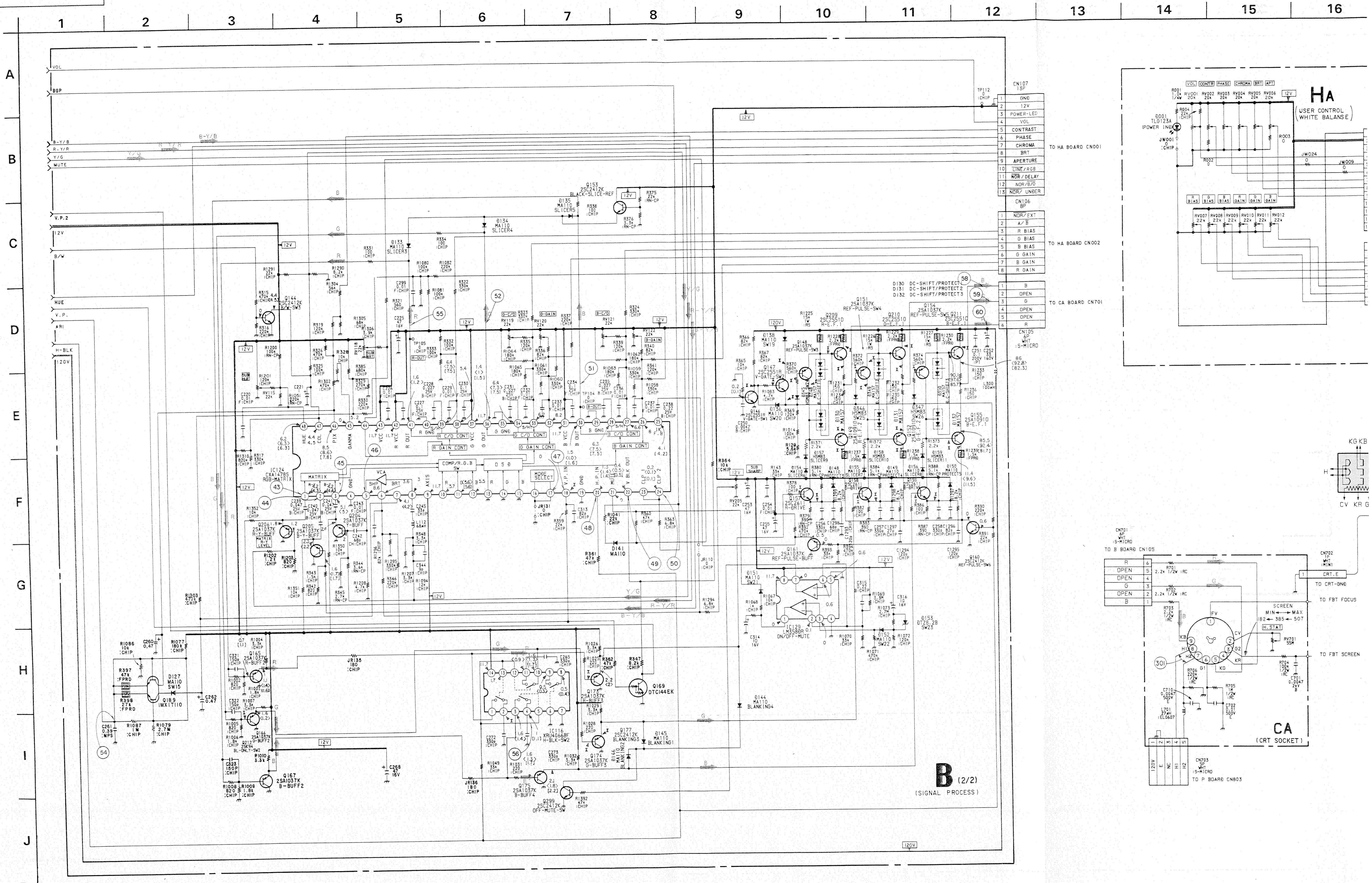
		PAL	NTSC 3.58	NTSC 4.43	S (Y/C)
Q113	E	0.5	0.4	0.4	0.5
	B	1.0	0.9	0.9	0.9
Q115	E	11.2	0.0	10.6	0.0
	B	2.8	0.1	2.4	0.1
Q118	E	0.0	1.7	1.7	1.7
Q119	B	0.1	1.7	1.7	1.7
Q121	E	0.0	1.7	1.7	1.7
Q122	B	0.0	1.7	1.7	1.7
Q130	E	4.3	4.4	4.4	4.5
	B	3.7	3.8	3.8	3.9
Q132	E	2.3	2.4	2.3	2.4
	C	1.8	1.7	1.7	1.7
	B	2.7	2.6	2.7	2.8
Q146	C	116.7	110.4	113.2	113.7
Q147	E	117.9	111.6	114.5	115.0
	C	126.0	120.3	123.4	123.8
	B	119.8	110.5	118.4	118.2
Q148	C	86.1	91.2	83.4	82.6
	B	94.0	86.3	92.4	92.1
Q149	E	1.6	1.4	1.7	1.7
	C	86.1	91.2	83.4	82.7
Q151	E	90.7	98.0	87.9	87.0
	C	89.2	96.5	86.4	85.3
	B	92.1	100.2	89.5	92.4
Q152	E	86.1	92.6	82.6	82.9
	C	10.8	9.7	10.9	10.9
Q154	B	92.5	99.8	90.1	88.7
Q155	B	88.3	95.7	85.7	83.9
Q157	E	82.4	87.5	79.9	79.9
	B	86.0	91.2	84.4	82.7
Q158	E	1.6	1.3	1.6	1.6
	B	2.1	1.8	2.1	2.2
Q159	E	1.6	1.3	1.6	1.7
	B	2.2	1.5	2.1	2.2
Q166	B	0.9	0.6	1.0	1.0
Q173	B	1.7	1.4	1.7	1.7
Q174	E	2.1	1.8	2.1	2.2
	B	1.6	1.3	1.6	1.6
Q178	B	6.2	6.2	6.3	6.1
Q209	E	83.4	87.9	80.3	80.4
	C	115.8	110.7	113.2	113.8
	B	87.6	92.8	85.0	84.3
Q210	E	86.5	93.1	83.0	83.3
	C	116.5	111.5	113.9	114.5
Q211	C	115.9	111.7	113.3	113.8

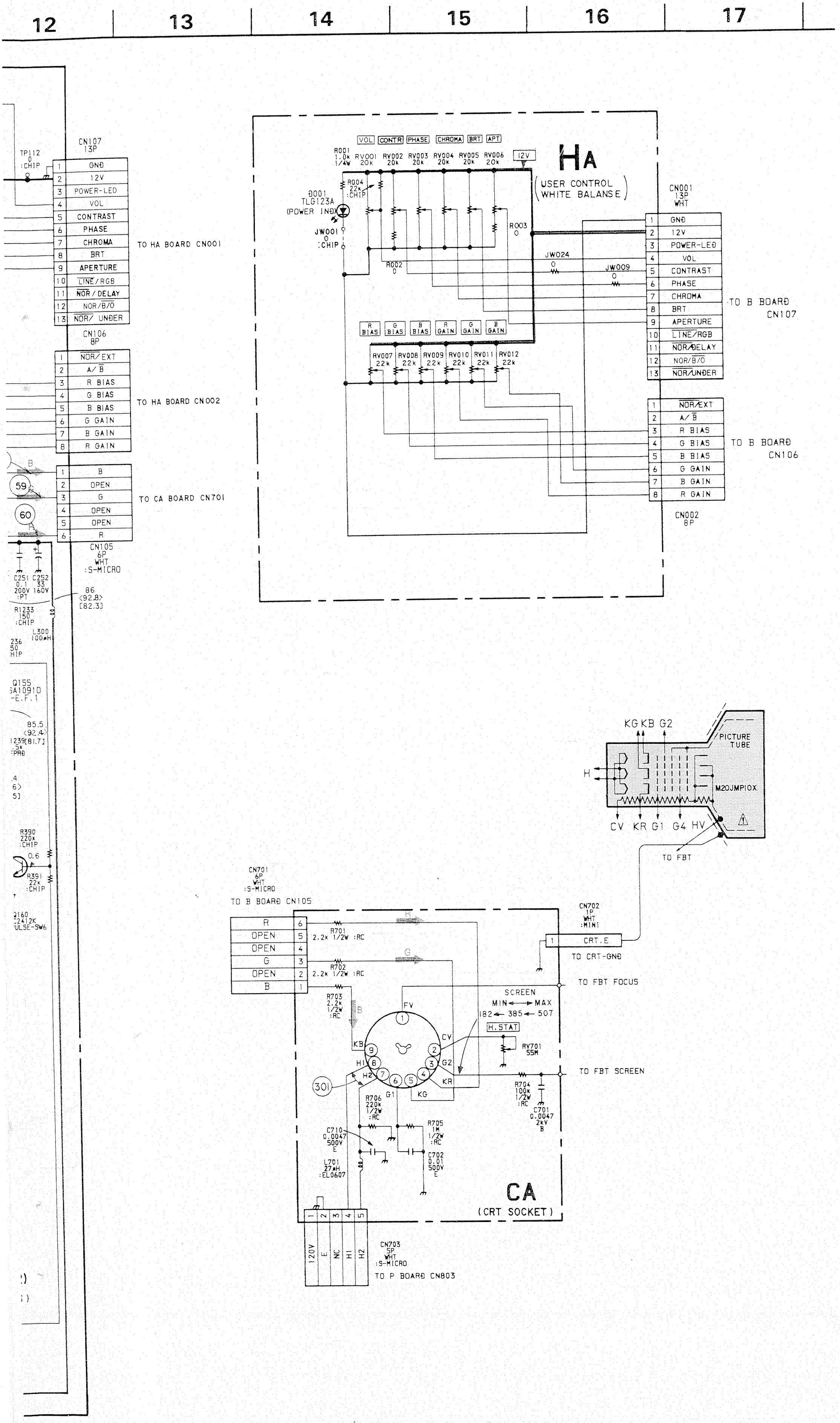
〈IC〉

		PAL	NTSC 3.58	NTSC 4.43	S (Y/C)
IC102	②	6.6	0.0	6.6	0.0
IC106	②	0.2	0.1	0.1	0.1
	④	1.8	1.7	1.7	1.7
IC107	②	10.7	10.6	10.6	10.6
	⑪	1.2	0.0	0.0	0.0
IC108	⑪	9.7	9.7	9.6	9.6
IC109	②	11.3	0.0	10.8	0.0
	③	11.3	0.0	11.3	0.0
	④	11.7	0.0	11.7	0.0
	⑤	11.0	0.0	11.0	0.0
IC110	④	2.1	2.5	2.5	2.5
	⑩	11.3	0.0	11.3	0.0
	⑪	11.3	0.0	0.0	0.0
	⑫	0.8	2.5	2.5	2.5
	⑭	1.7	2.5	2.6	2.5
IC113	④	2.7	2.6	2.6	2.6
	⑦	4.2	4.2	4.3	4.3
	⑪	3.0	2.8	3.0	2.8
	㉕	2.2	2.9	2.2	1.9
IC114	⑩	11.4	0.0	0.0	0.0
	⑬	3.7	3.8	3.8	3.8
IC115	③	1.2	0.6	0.7	0.7
	⑬	3.5	3.4	2.8	3.4
IC116	②	0.0	1.0	1.1	1.1
IC120	③	5.5	5.6	5.6	5.6
	④	5.5	5.6	5.6	5.6
IC121	⑬	5.3	5.4	5.2	5.2
	⑭	5.6	5.6	5.6	5.7
	⑮	5.6	5.6	5.6	5.7
IC122	②	5.3	5.4	5.2	5.2
	③	5.3	5.4	5.2	5.2
IC124	⑪	0.1	0.2	0.2	0.2

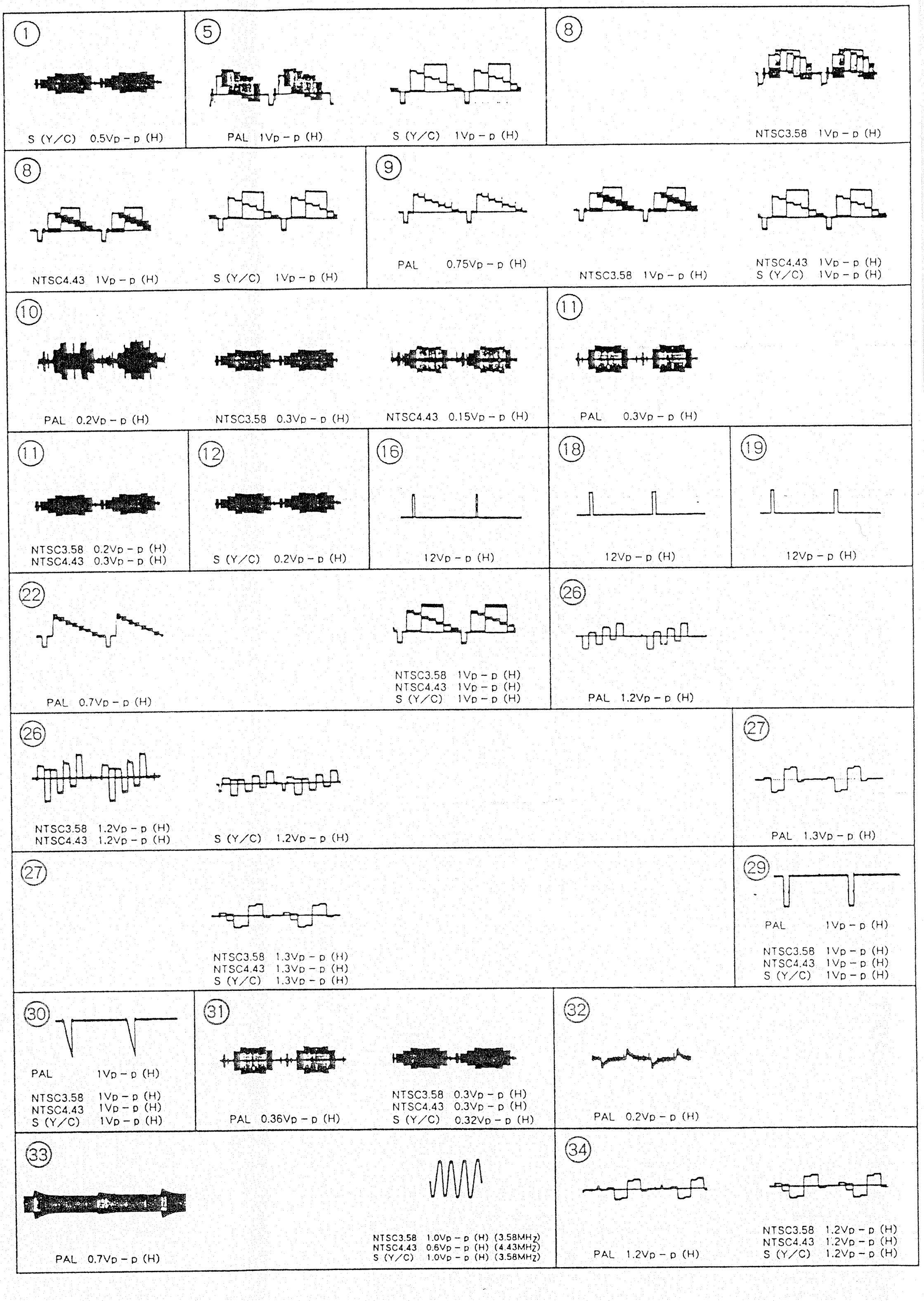
Schematic diagram
← B(1/2) board

Schematic diagrams
B(2/2)
CA HA boards →

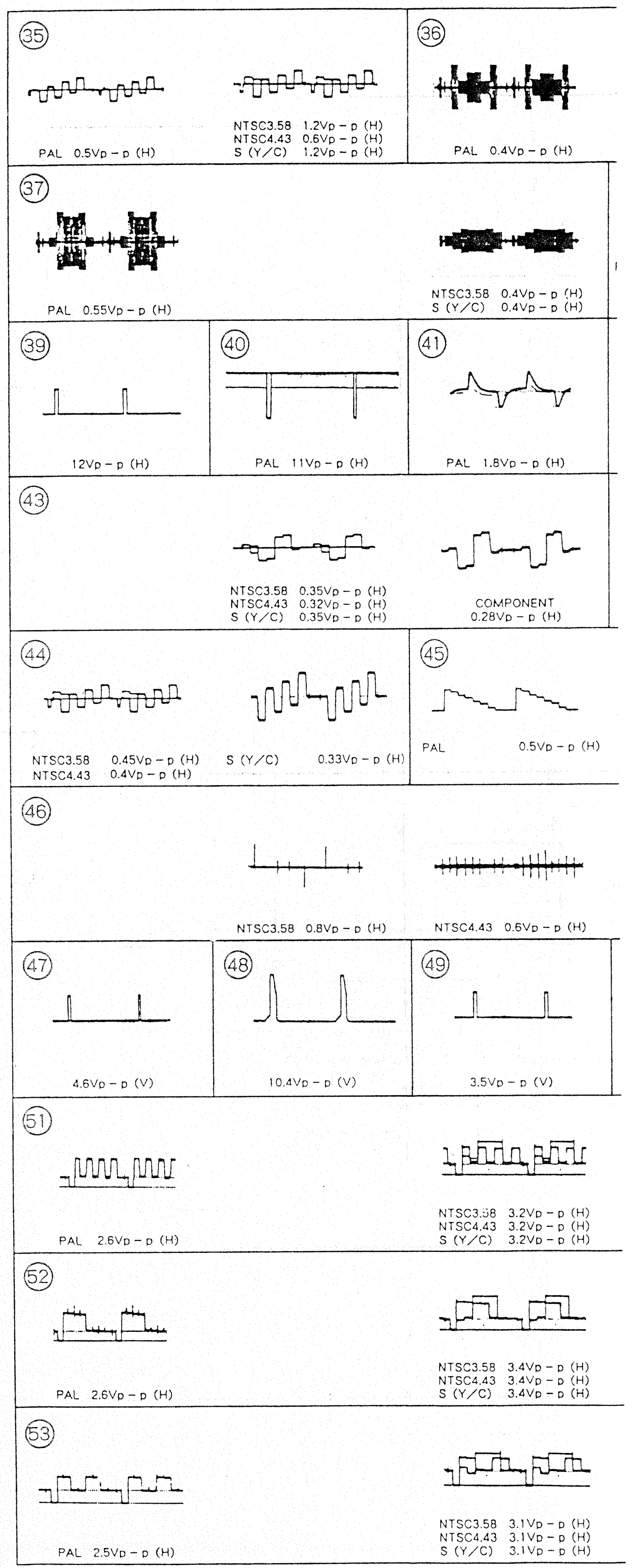

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
VOL
BGP
B-Y/B
R-Y/R
Y/G
MUTE
V.P.2
12V
B/W
HUE
V.P.
ARI
H-BLK
120V
CN107 13P
GND
12V
POWER-LED
VOL
CONTRAST
PHASE
CHROMA
BRT
APERTURE
LINE/RGB
NOR/DELAY
NOR/B/O
NOR/UNDER
TO HA BOARD CN001
CN106 8P
NOR/EXT
A/B
R BIAS
G BIAS
B BIAS
G GAIN
B GAIN
R GAIN
TO HA BOARD CN002
B
OPEN
G
OPEN
OPEN
R
TO CA BOARD CN701
CN105 6P WHT :S-MICRO
D130 DC-SHIFT/PROTECT1
D131 DC-SHIFT/PROTECT2
D132 DC-SHIFT/PROTECT3
IC124 CXA1478S RGB-MATRIX
MATRIX
COMP/R.G.B SW
DSB
MODE SELECT
VCA
Q153 2SC2412K BLACK-SLICE-REF
IC116 XRU4066BF H-BLK-SW2
IC129 LM358DR ON/OFF-MUTE
Q169 DTC144EK
Q299 2SC2412K OFF-MUTE-SW
B (2/2)
(SIGNAL PROCESS)
HA
(USER CONTROL WHITE BALANSE)
VOL
CONTR
PHASE
CHROMA
BRT
APT
D001 TLG123A (POWER IND)
R BIAS
G BIAS
B BIAS
R GAIN
G GAIN
B GAIN
CN701 6P WHT :S-MICRO
TO B BOARD CN105
CN702 1P WHT :MINI
CRT-E
TO CRT-GND
TO FBT FOCUS
SCREEN
MIN ← → MAX
TO FBT SCREEN
CA
(CRT SOCKET)
CN703 5P WHT :S-MICRO
TO P BOARD CN803
120V
E
NC
H1
H2


12
13
14
15
16
17
TP112
0
:CHIP
CN107
13P
1 GND
2 12V
3 POWER-LED
4 VOL
5 CONTRAST
6 PHASE
7 CHROMA
8 BRT
9 APERTURE
10 LINE/RGB
11 NOR / DELAY
12 NOR/B/O
13 NOR/ UNDER
TO HA BOARD CN001
CN106
8P
1 NOR/EXT
2 A/B
3 R BIAS
4 G BIAS
5 B BIAS
6 G GAIN
7 B GAIN
8 R GAIN
TO HA BOARD CN002
1 B
2 OPEN
3 G
4 OPEN
5 OPEN
6 R
TO CA BOARD CN701
59
60
CN105
6P
WHT
:S-MICRO
C251 0.1 200V :PT
C252 33 160V
86
<92.8>
[82.3]
R1233 150 :CHIP
L300 100µH
Q155
VOL
CONTR
PHASE
CHROMA
BRT
APT
R001 1.0k 1/4W
RV001 20k
RV002 20k
RV003 20k
RV004 20k
RV005 20k
RV006 20k
12V
HA
(USER CONTROL WHITE BALANSE)
R004 22k :CHIP
D001 TLG123A (POWER IND)
JW001 0 :CHIP
R003 0
R002 0
JW024 0
JW009 0
R BIAS
G BIAS
B BIAS
R GAIN
G GAIN
B GAIN
RV007 22k
RV008 22k
RV009 22k
RV010 22k
RV011 22k
RV012 22k
CN001
13P
WHT
1 GND
2 12V
3 POWER-LED
4 VOL
5 CONTRAST
6 PHASE
7 CHROMA
8 BRT
9 APERTURE
10 LINE/RGB
11 NOR/DELAY
12 NOR/B/O
13 NOR/UNDER
TO B BOARD CN107
1 NOR/EXT
2 A/B
3 R BIAS
4 G BIAS
5 B BIAS
6 G GAIN
7 B GAIN
8 R GAIN
TO B BOARD CN106
CN002
8P
KG KB G2
PICTURE TUBE
H
M20JMP10X
CV KR G1 G4 HV
TO FBT
CN701
6P
WHT
:S-MICRO
TO B BOARD CN105
R 6
OPEN 5
OPEN 4
G 3
OPEN 2
B 1
R701 2.2k 1/2W :RC
R702 2.2k 1/2W :RC
R703 2.2k 1/2W :RC
R
G
B
CN702
1P
WHT
:MINI
1 CRT.E
TO CRT-GND
TO FBT FOCUS
SCREEN
MIN ← → MAX
182 ← 385 ← 507
H.STAT
RV701 55M
FV
CV
KB
G2
H1
H2
KR
G1
KG
301
TO FBT SCREEN
R704 100k 1/2W :RC
C701 0.0047 2kV B
R706 220k 1/2W :RC
R705 1M 1/2W :RC
C710 0.0047 500V E
C702 0.01 500V E
L701 27µH :EL0607
CA
(CRT SOCKET)
1 120V
2 E
3 NC
4 H1
5 H2
CN703
5P
WHT
:S-MICRO
TO P BOARD CN803

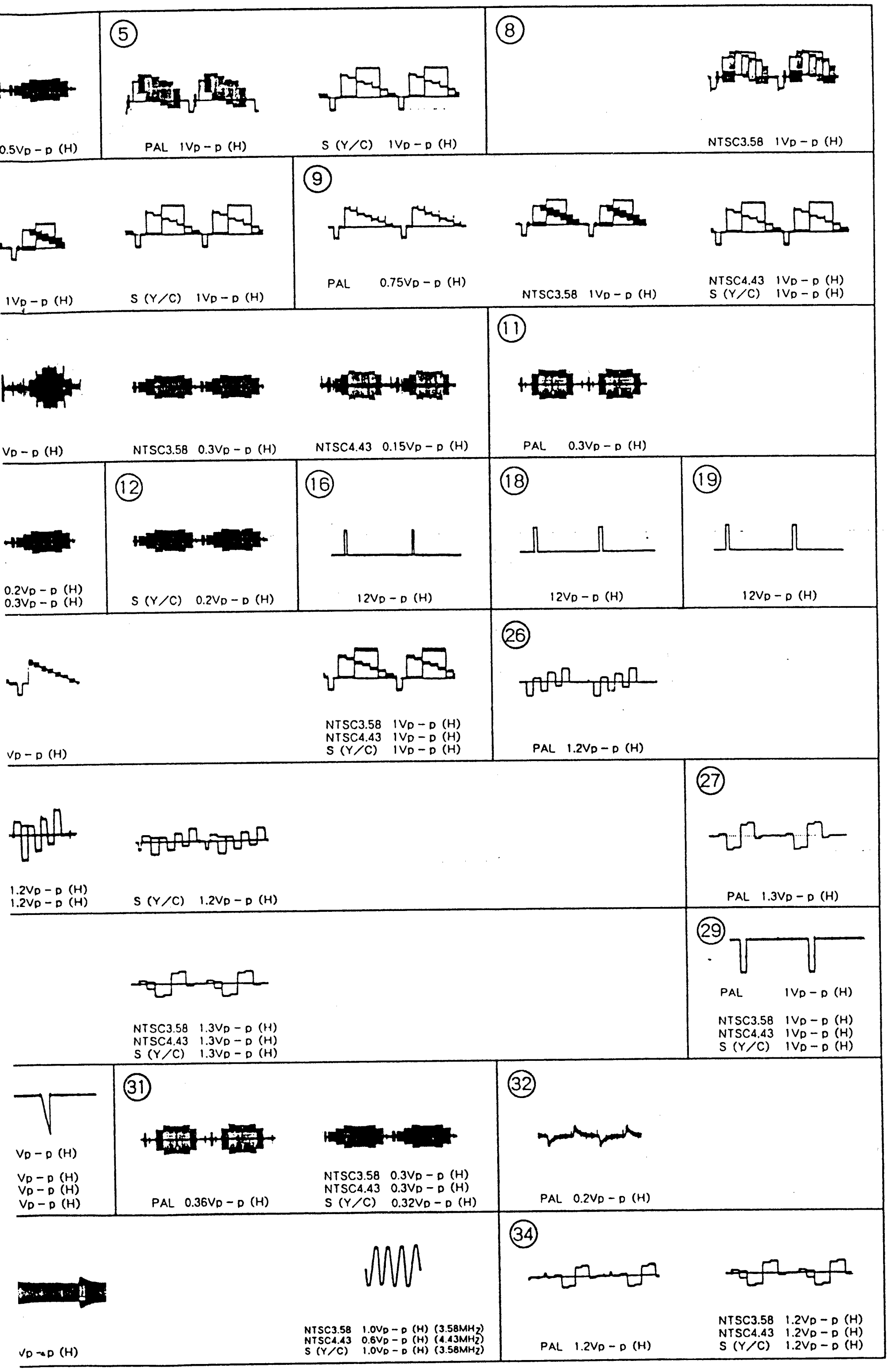
• WAVEFORMS B BOARD



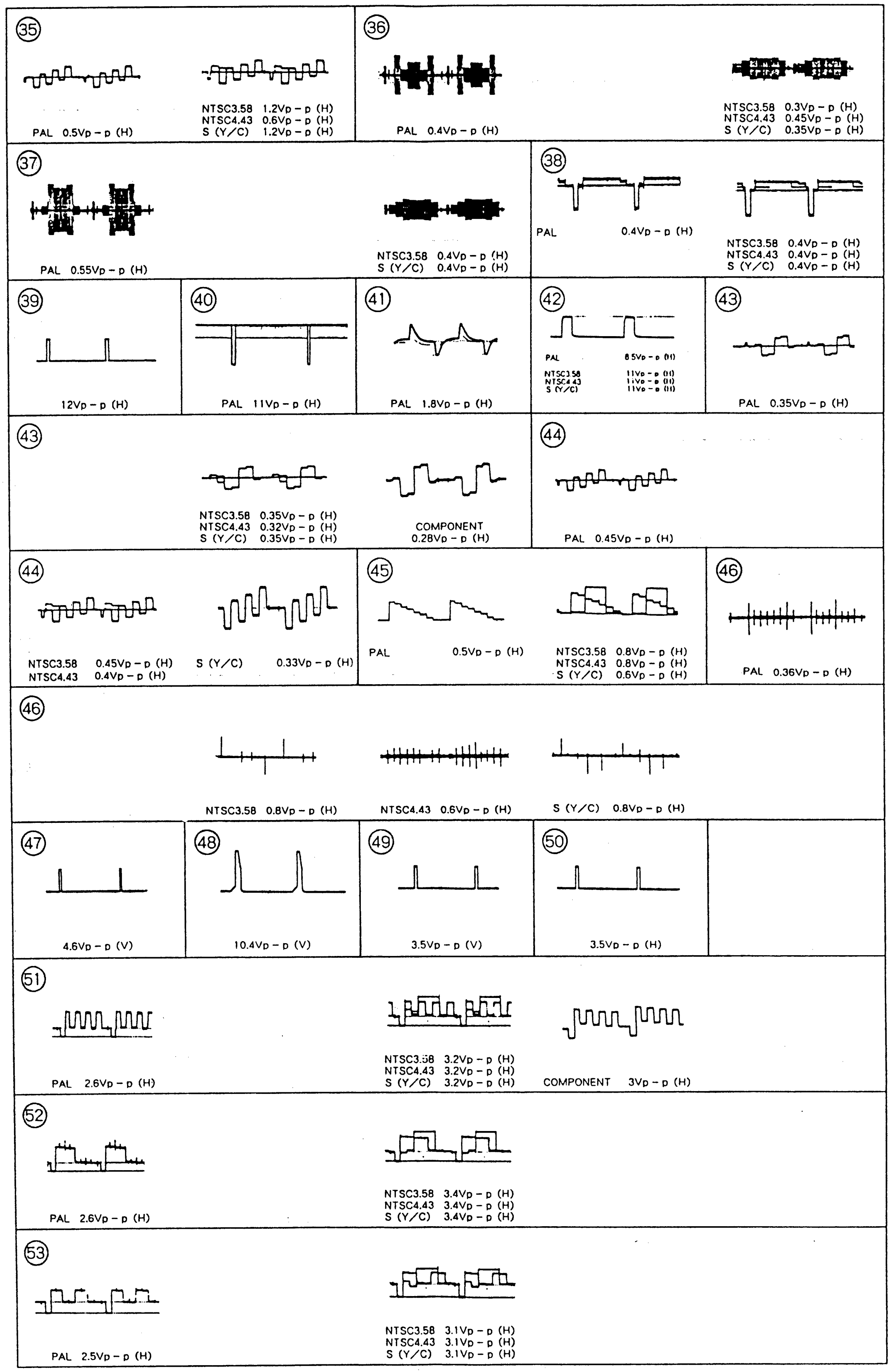
• WAVEFORMS B BOARD



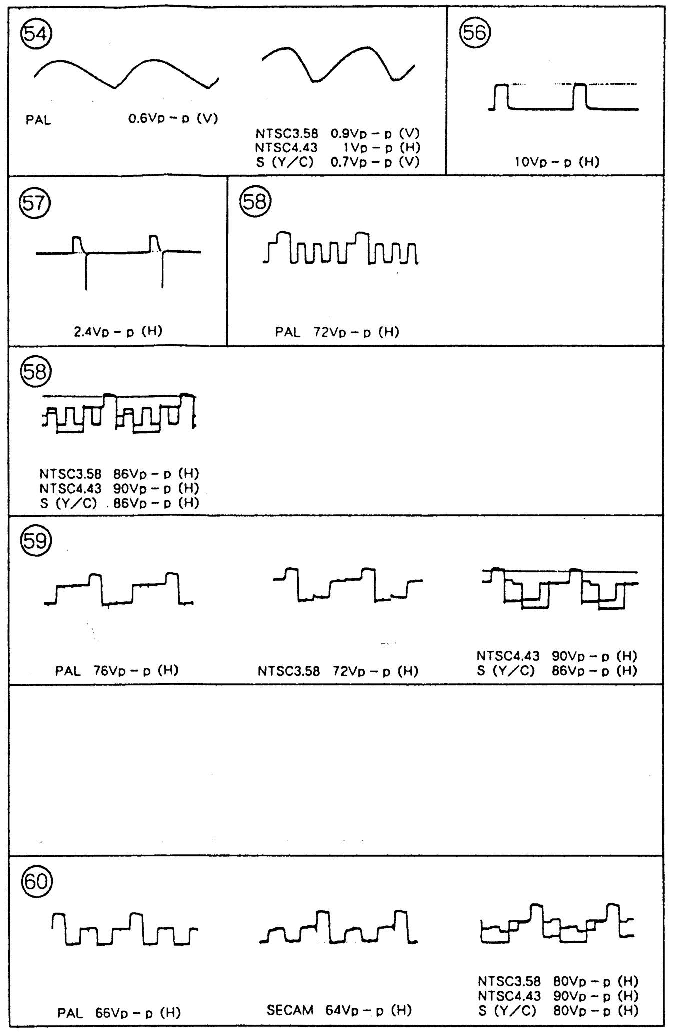
FORMS B BOARD



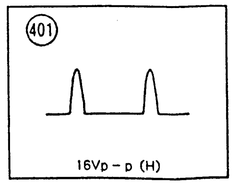
• WAVEFORMS B BOARD



• WAVEFORMS B BOARD

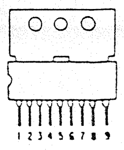


• WAVEFORM CA BOARD

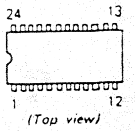


6-5. SEMICONDUCTORS

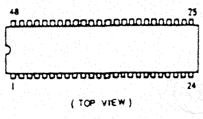
AN5265



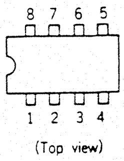
CXA1214P


24
13
1
12
(Top view)

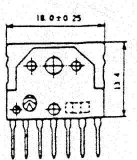
CXA1478S


48
25
1
24
(TOP VIEW)

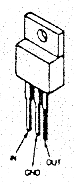
CX23025


8 7 6 5
1 2 3 4
(Top view)

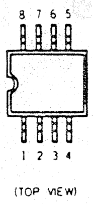
LA7830



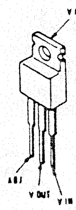
LM7805CT
LM7812CT
MC7812CT



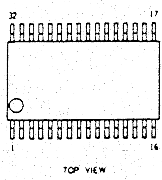
LM358D
LM358DR
MM1148XFF
MM1149XF
NJM2245M
XRA10393F


8 7 6 5
1 2 3 4
(TOP VIEW)

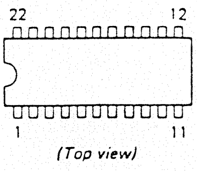
MC14538BF


V OUT
ADJ
V OUT
V IN

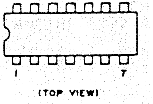
M51279FP


32
17
1
16
TOP VIEW

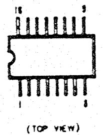
µPC1377C


22
12
1
11
(Top view)

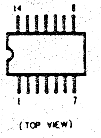
XRU4011BF
XRU4070BF


14
8
1
7
(TOP VIEW)

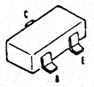
XRU4052BF
XRU4053BF
XRU4066BF


16
9
1
8
(TOP VIEW)

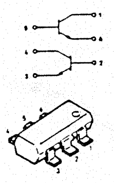
XRU4584BF


14
8
1
7
(TOP VIEW)

DTA144EK
DTC144EK
2SA1037K
2SA1162-G
2SC2412K



IMX1
IMX1T110



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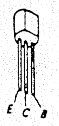
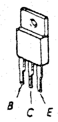
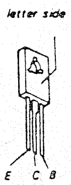
2SC1890-A
2SC2551-0
2SC2551R



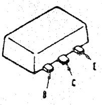
2SC2334-L
2SD1134



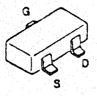
2SC2611
2SC2688


letter side
E C B

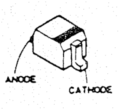
2SC3736



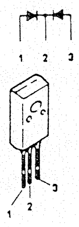
2SK94



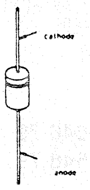
DTZ15B
DTZ20B
DTZ24B
DTZ5.6A
DTZ6.2-TT11
DTZ6.2B
DTZ8.2B
RD15SB1


ANODE
CATHODE

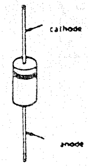
D10SC4M



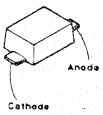
ERC81-004


cathode
anode

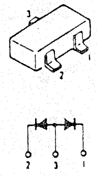
GP08DPK23
HSM83-TL
RD5.6EBZ7STN
1SS83
1SS83TD


cathode
anode

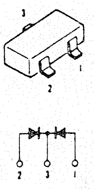
MA110


Anode
Cathode

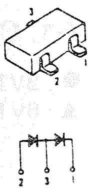
MA151WA
1S2836



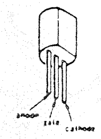
MA151WK
MA152WK



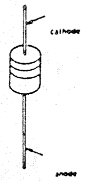
MA157
1SS226



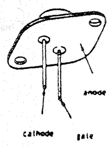
N13T1


anode
gate
cathode

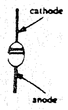
RD3.6ESB1
RD5.6ESB2
RD8.2ESB3


cathode
anode

SEL3810DLC05
SLP281C-50
TLG123A


anode
cathode
gate

U05G


cathode
anode

SECTION 7
EXPLODED VIEWS

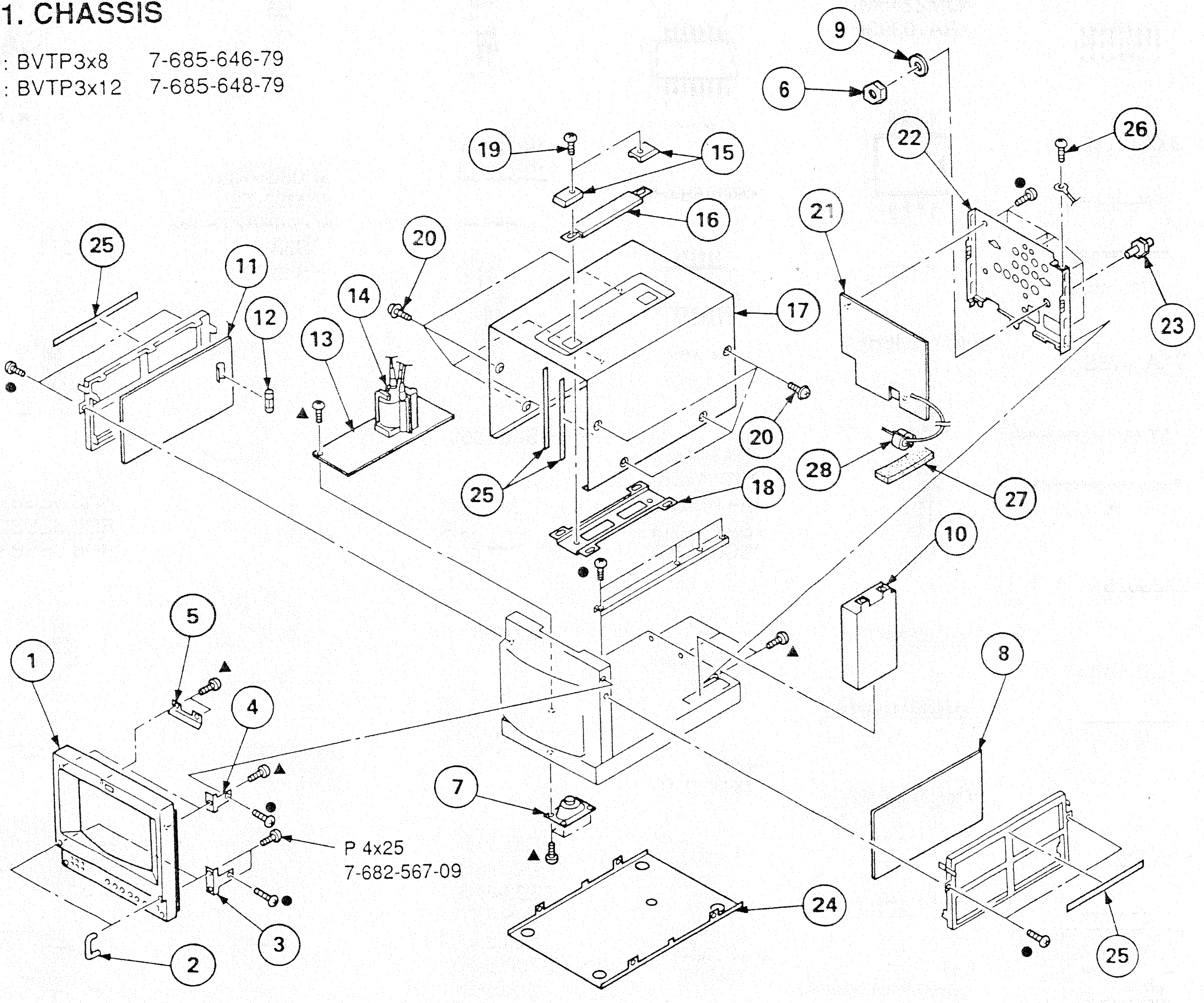
NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. CHASSIS

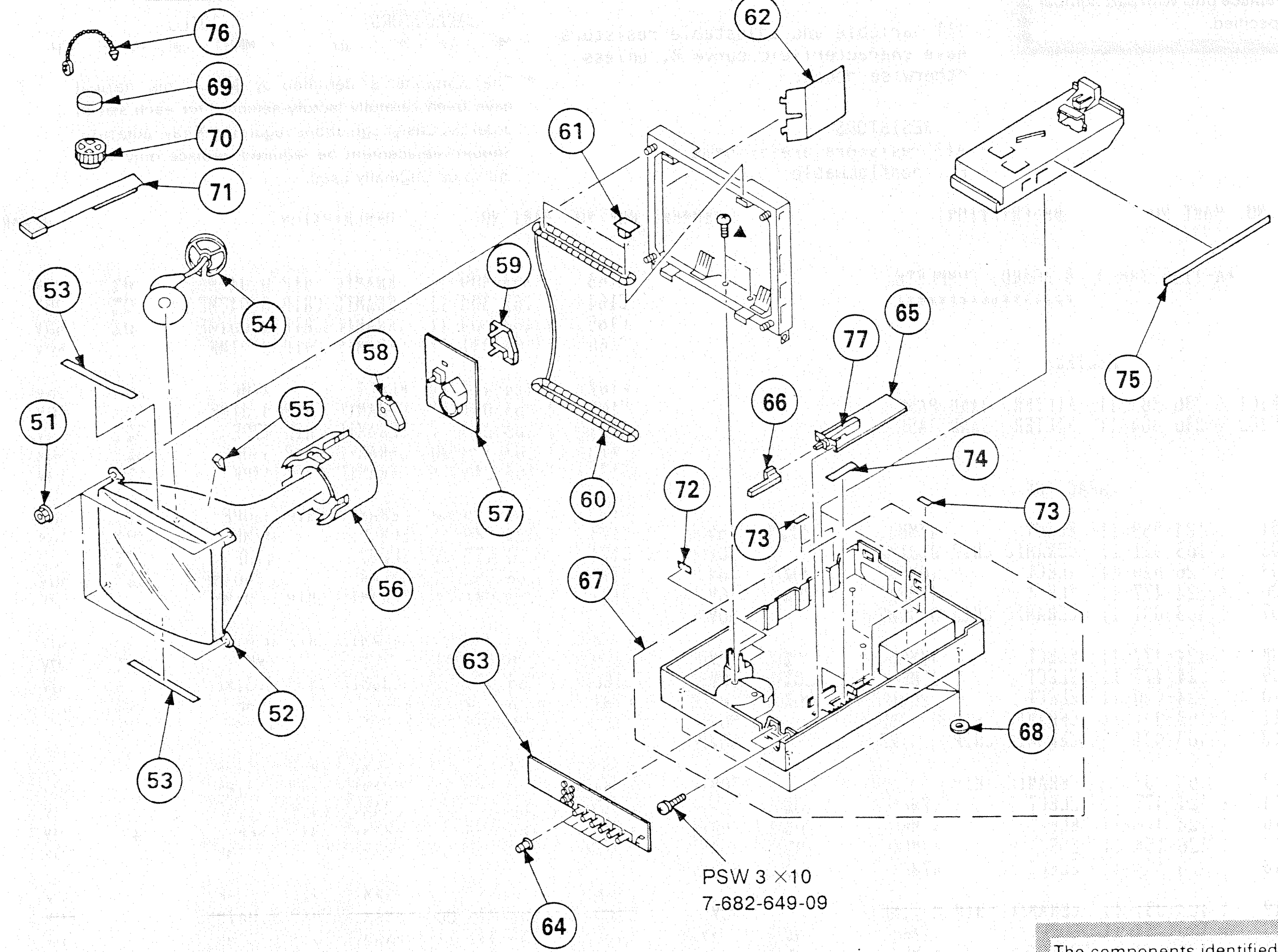
● : BVTP3x8 7-685-646-79
▲ : BVTP3x12 7-685-648-79



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4031-572-1	BEZEL ASSY	
2	4-037-569-01	HANDLE, PROTECTOR	
3	*4-034-845-01	BRACKET (L), BEZEL	
4	*4-034-846-01	BRACKET (U), BEZEL	
6	*3-175-741-01	NUT	
7	1-544-252-11	SPEAKER	
8	*A-1135-786-A	B BOARD, COMPLETE	
9	*3-175-742-01	WASHER	
10	⚠1-413-720-21	SWITCHING REGULATOR	
11	*A-1346-202-A	D BOARD, COMPLETE	
12	⚠1-576-232-11	FUSE (H.B.C.) (5.0A/250V)	
13	*A-1195-048-A	P BOARD, COMPLETE	
14	⚠1-439-526-11	TRANSFORMER ASSY, FLYBACK	
15	4-034-847-11	HANDLE (BASE)	
16	3-419-372-41	HANDLE	
17	*X-4031-299-1	CABINET ASSY	
18	*X-4030-273-1	REINFORCEMENT ASSY, HANDLE	
19	4-035-452-01	SCREW (M4X10)	
20	4-034-834-01	SCREW (CLAW) (4X6), CASE	
21	A-1275-100-A	QA BOARD, COMPLETE	
22	*4-034-864-51	CHASSIS, R	
23	*3-175-740-01	TERMINAL	
24	*4-041-407-01	CABINET, BOTTOM	
25	*4-035-691-01	CLOTH, VIBRATION PROOF	
26	4-389-025-01	SCREW (M4X8)(EXT TOOTH WASHER)	
27	*4-036-058-01	SPONGE	
28	1-941-913-02	CORE ASSY, FERRITE	

7-2. PICTURE TUBE

▲ : BVTP3x12 7-685-648-79



The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
51	4-304-511-00	FLANGE NUT (5M)	
52	⚠8-737-651-05	PITURE TUBE (M20JMP10X)	
53	4-035-332-01	CLOTH, PROTECTION	
54	*4-034-856-01	HOLDER, HV CABLE	
55	4-309-369-00	SPACER, DEFLECTION YOKE	
56	⚠1-451-319-22	DEFLECTION YOKE (Y9FXC)	
57	*1-641-720-11	CA BOARD	
58	*4-376-133-11	COVER (MAIN), CV VOL	
59	*4-376-132-11	COVER (REAR LID), CV VOL	
60	⚠1-426-043-12	COIL, DEGAUSSING	
61	4-380-534-01	CAP, DGC	
62	*4-034-850-01	INSULATOR	
63	*A-1371-999-A	HA BOARD, COMPLETE	
64	X-4030-162-2	KNOB ASSY, CONTROL	
65	*A-1241-140-A	FA BOARD, COMPLETE	
66	4-034-841-01	SWITCH, POWER	
67	*X-4030-166-4	CHASSIS ASSY, BOTTOM	
68	4-034-840-01	RUBBER, FOOT	
69	1-452-126-11	MAGNET	
70	1-453-094-00	MAGNET, ROTATABLE DISK; 15MMϕ	
71	X-4308-815-0	PERMALLOY ASSY, CONVERGENCE	
72	*4-036-047-02	RUBBER, VIBRATION PROOF	
73	3-839-640-00	CUSHION	
74	3-831-441-11	CUSHION (F)	
75	*4-035-691-01	CLOTH, VIBRATION PROOF	
76	4-308-870-00	CLIP, LEAD WIRE	
77	⚠1-692-050-11	SWITCH, PUSH (AC POWER) (1 KEY)	

B

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

- The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1135-786-A	B BOARD, COMPLETE *****************			
		<FILTER>			
BPF101	1-236-363-11	FILTER, BAND PASS			
BPF102	1-236-364-11	FILTER, BAND PASS			
		<CAPACITOR>			
C101	1-124-589-11	ELECT	47MF	20%	16V
C102	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C103	1-126-320-11	ELECT	10MF	20%	16V
C106	1-124-477-11	ELECT	47MF	20%	16V
C107	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C108	1-124-477-11	ELECT	47MF	20%	16V
C109	1-124-477-11	ELECT	47MF	20%	16V
C110	1-124-120-11	ELECT	220MF	20%	16V
C111	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C112	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C113	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C114	1-124-477-11	ELECT	47MF	20%	16V
C116	1-124-477-11	ELECT	47MF	20%	16V
C117	1-126-154-11	ELECT	47MF	20%	6.3V
C118	1-126-154-11	ELECT	47MF	20%	6.3V
C119	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C120	1-126-154-11	ELECT	47MF	20%	6.3V
C121	1-126-154-11	ELECT	47MF	20%	6.3V
C122	1-124-477-11	ELECT	47MF	20%	16V
C123	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C124	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C125	1-126-154-11	ELECT	47MF	20%	6.3V
C126	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C127	1-126-154-11	ELECT	47MF	20%	6.3V
C128	1-126-154-11	ELECT	47MF	20%	6.3V
C129	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C130	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C131	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C142	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C143	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C146	1-126-157-11	ELECT	10MF	20%	16V
C150	1-124-589-11	ELECT	47MF	20%	16V
C153	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C154	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C156	1-164-299-11	CERAMIC CHIP	0.22MF	10%	25V
C157	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C158	1-124-477-11	ELECT	47MF	20%	16V
C159	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C160	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C161	1-124-902-00	ELECT	0.47MF	20%	50V
C162	1-124-903-11	ELECT	1MF	20%	50V
C163	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C164	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C165	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C166	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C167	1-124-477-11	ELECT	47MF	20%	16V
C168	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C169	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C170	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C171	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C172	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C173	1-124-589-11	ELECT	47MF	20%	16V
C174	1-124-477-11	ELECT	47MF	20%	16V
C175	1-108-792-11	MYLAR	0.001MF	5%	50V
C177	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C178	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C179	1-126-160-11	ELECT	1MF	20%	50V
C180	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C181	1-126-154-11	ELECT	47MF	20%	6.3V
C182	1-126-163-11	ELECT	4.7MF	20%	16V
C183	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C184	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C185	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C186	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C187	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C188	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C189	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C191	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C192	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C196	1-124-589-11	ELECT	47MF	20%	16V
C202	1-124-589-11	ELECT	47MF	20%	16V
C204	1-124-589-11	ELECT	47MF	20%	16V
C209	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C213	1-124-589-11	ELECT	47MF	20%	16V
C219	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C220	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C221	1-124-903-11	ELECT	1MF	20%	50V
C224	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C225	1-124-477-11	ELECT	47MF	20%	16V
C226	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C227	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C228	1-163-986-00	CERAMIC CHIP	0.027MF	10%	25V
C229	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C230	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C231	1-163-986-00	CERAMIC CHIP	0.027MF	10%	25V
C232	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C233	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C234	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C235	1-163-986-00	CERAMIC CHIP	0.027MF	10%	25V
C236	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C237	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C238	1-164-299-11	CERAMIC CHIP	0.22MF	10%	25V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C239	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C240	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C241	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C242	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C243	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C244	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C245	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C250	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C251	1-110-364-11	MYLAR	0.1MF	10%	200V
C252	1-123-935-00	ELECT	33MF	20%	160V
C253	1-124-477-11	ELECT	47MF	20%	16V
C254	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C255	1-124-477-11	ELECT	47MF	20%	16V
C256	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C257	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C258	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C260	1-124-465-00	ELECT	0.47MF	20%	50V
C261	1-137-193-11	FILM	0.39MF	5%	50V
C262	1-124-465-00	ELECT	0.47MF	20%	50V
C264	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C265	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C268	1-124-477-11	ELECT	47MF	20%	16V
C272	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C273	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C279	1-126-157-11	ELECT	10MF	20%	16V
C280	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C281	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C282	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C283	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C284	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C299	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C300	1-126-157-11	ELECT	10MF	20%	16V
C301	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C302	1-124-589-11	ELECT	47MF	20%	16V
C303	1-126-157-11	ELECT	10MF	20%	16V
C304	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C305	1-124-257-00	ELECT	2.2MF	20%	50V
C306	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C307	1-163-145-00	CERAMIC CHIP	0.0015MF	5%	50V
C308	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C309	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C310	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C313	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C314	1-126-157-11	ELECT	10MF	20%	16V
C315	1-164-299-11	CERAMIC CHIP	0.22MF	10%	25V
C316	1-126-157-11	ELECT	10MF	20%	16V
C317	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C321	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C322	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C323	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C344	1-163-092-00	CERAMIC CHIP	9PF	0.25PF	50V
C1001	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C1293	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C1294	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C1295	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C1296	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C1297	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C1298	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C1299	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C1303	1-126-160-11	ELECT	1MF	20%	50V

<FILTER BLOCK>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CFM101	1-464-880-11	FILTER BLOCK, COM (CFB-2)	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN101	1-506-480-11	PIN, CONNECTOR 15P	
CN102	*1-564-506-11	PLUG, CONNECTOR 3P	
CN104	*1-564-011-11	PIN, CONNECTOR 12P	
CN105	*1-564-509-11	PLUG, CONNECTOR 6P	
CN106	1-506-473-11	PIN, CONNECTOR 8P	
CN107	1-506-478-11	PIN, CONNECTOR 13P	

<TRAP MODULE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CTR101	1-236-366-11	MODULE, TRAP	
CTR102	1-236-365-11	MODULE, TRAP	

<TRIMMER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CV101	1-141-418-11	CAP, ADJ	
CV102	1-141-418-11	CAP, ADJ	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D103	8-719-404-46	DIODE MA110	
D104	8-719-404-46	DIODE MA110	
D106	8-719-404-46	DIODE MA110	
D107	8-719-404-46	DIODE MA110	
D113	8-719-404-46	DIODE MA110	
D120	8-719-404-46	DIODE MA110	
D123	8-719-404-46	DIODE MA110	
D127	8-719-404-46	DIODE MA110	
D129	8-719-404-46	DIODE MA110	
D130	8-719-800-76	DIODE 1SS226	
D131	8-719-800-76	DIODE 1SS226	
D132	8-719-800-76	DIODE 1SS226	
D133	8-719-404-46	DIODE MA110	
D134	8-719-404-46	DIODE MA110	
D135	8-719-404-46	DIODE MA110	
D136	8-719-404-46	DIODE MA110	
D137	8-719-404-46	DIODE MA110	
D138	8-719-404-46	DIODE MA110	
D141	8-719-404-46	DIODE MA110	
D144	8-719-404-46	DIODE MA110	
D145	8-719-404-46	DIODE MA110	
D146	8-719-404-46	DIODE MA110	
D148	8-719-404-46	DIODE MA110	
D149	8-719-404-46	DIODE MA110	
D150	8-719-404-46	DIODE MA110	
D151	8-719-404-46	DIODE MA110	
D152	8-719-404-46	DIODE MA110	
D153	8-719-977-20	DIODE DTZ8.2B	
D154	8-719-404-46	DIODE MA110	
D155	8-719-404-46	DIODE MA110	
D156	8-719-404-46	DIODE MA110	
D157	8-719-901-83	DIODE 1SS83	
D158	8-719-901-83	DIODE 1SS83	
D159	8-719-901-83	DIODE 1SS83	
D163	8-719-404-46	DIODE MA110	
D180	8-719-404-46	DIODE MA110	
D186	8-719-801-78	DIODE 1SS184	
D191	8-719-104-34	DIODE 1S2836	
D285	8-719-404-46	DIODE MA110	
D341	8-719-404-46	DIODE MA110	
D342	8-719-104-34	DIODE 1S2836	

B

REF.NO.	PART NO.	DESCRIPTION	REMARK
D343	8-719-800-76	DIODE 1SS226	
D345	8-719-901-83	DIODE 1SS83	
D346	8-719-901-83	DIODE 1SS83	
D347	8-719-901-83	DIODE 1SS83	
D348	8-719-800-76	DIODE 1SS226	
D349	8-719-800-76	DIODE 1SS226	
D350	8-719-800-76	DIODE 1SS226	
D390	8-719-800-76	DIODE 1SS226	

<DELAY LINE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
DL101	1-415-632-11	DELAY LINE, Y	
DL102	1-415-633-11	DELAY LINE, Y	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC102	8-759-501-21	IC MM1149XF	
IC103	8-759-501-21	IC MM1149XF	
IC104	8-759-501-21	IC MM1149XF	
IC107	8-759-509-57	IC XRU4584BF	
IC109	8-759-509-37	IC XRU4070BF	
IC110	8-759-509-17	IC XRU4053BF	
IC111	8-759-509-17	IC XRU4053BF	
IC112	8-759-924-12	IC LM7805CT	
IC113	8-759-631-08	IC M51279FP	
IC114	8-759-932-64	IC BU4052BF	
IC115	8-759-932-64	IC BU4052BF	
IC116	8-759-509-05	IC XRU4066BF	
IC119	8-759-501-21	IC MM1149XF	
IC123	8-759-998-98	IC LM358D	
IC124	8-752-052-62	IC CXA1478S	
IC128	8-759-998-98	IC LM358D	
IC129	8-759-998-98	IC LM358D	

<COIL>

REF.NO.	PART NO.	DESCRIPTION		REMARK
L101	1-410-470-11	INDUCTOR	10UH	
L103	1-412-002-31	INDUCTOR CHIP	4.7UH	
L104	1-412-002-31	INDUCTOR CHIP	4.7UH	
L105	1-412-002-31	INDUCTOR CHIP	4.7UH	
L106	1-410-470-11	INDUCTOR	10UH	
L107	1-410-470-11	INDUCTOR	10UH	
L112	1-408-419-00	INDUCTOR	68UH	
L250	1-410-997-31	INDUCTOR CHIP	2.2UH	
L251	1-410-999-11	INDUCTOR CHIP	3.3UH	
L252	1-410-478-11	INDUCTOR	47UH	
L300	1-410-482-31	INDUCTOR	100UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q101	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q102	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q103	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q104	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q105	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q107	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q108	8-729-216-22	TRANSISTOR 2SA1162-G	
Q112	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q115	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q117	8-729-216-22	TRANSISTOR 2SA1162-G	
Q118	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q119	8-729-216-22	TRANSISTOR 2SA1162-G	
Q120	8-729-216-22	TRANSISTOR 2SA1162-G	
Q121	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q122	8-729-216-22	TRANSISTOR 2SA1162-G	
Q123	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q124	8-729-216-22	TRANSISTOR 2SA1162-G	
Q125	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q126	8-729-901-01	TRANSISTOR DTC144EK	
Q127	8-729-216-22	TRANSISTOR 2SA1162-G	
Q128	8-729-216-22	TRANSISTOR 2SA1162-G	
Q130	8-729-216-22	TRANSISTOR 2SA1162-G	
Q131	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q133	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q134	8-729-901-01	TRANSISTOR DTC144EK	
Q135	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q138	8-729-907-26	TRANSISTOR IMX1	
Q140	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q141	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q142	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q144	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q146	8-729-255-12	TRANSISTOR 2SC2551-O	
Q147	8-729-255-12	TRANSISTOR 2SC2551-O	
Q148	8-729-216-22	TRANSISTOR 2SA1162-G	
Q149	8-729-200-17	TRANSISTOR 2SA1091-O	
Q150	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q151	8-729-216-22	TRANSISTOR 2SA1162-G	
Q152	8-729-200-17	TRANSISTOR 2SA1091-O	
Q153	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q154	8-729-216-22	TRANSISTOR 2SA1162-G	
Q155	8-729-200-17	TRANSISTOR 2SA1091-O	
Q156	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q157	8-729-326-11	TRANSISTOR 2SC2611	
Q158	8-729-326-11	TRANSISTOR 2SC2611	
Q159	8-729-326-11	TRANSISTOR 2SC2611	
Q160	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q161	8-729-216-22	TRANSISTOR 2SA1162-G	
Q165	8-729-216-22	TRANSISTOR 2SA1162-G	
Q166	8-729-216-22	TRANSISTOR 2SA1162-G	
Q167	8-729-216-22	TRANSISTOR 2SA1162-G	
Q169	8-729-901-01	TRANSISTOR DTC144EK	
Q171	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q173	8-729-216-22	TRANSISTOR 2SA1162-G	
Q174	8-729-216-22	TRANSISTOR 2SA1162-G	
Q175	8-729-216-22	TRANSISTOR 2SA1162-G	
Q176	8-729-216-22	TRANSISTOR 2SA1162-G	
Q189	8-729-907-26	TRANSISTOR IMX1	
Q191	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q192	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q193	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q194	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q195	8-729-216-22	TRANSISTOR 2SA1162-G	
Q196	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q197	8-729-216-22	TRANSISTOR 2SA1162-G	
Q198	8-729-216-22	TRANSISTOR 2SA1162-G	
Q199	8-729-216-22	TRANSISTOR 2SA1162-G	
Q204	8-729-216-22	TRANSISTOR 2SA1162-G	
Q205	8-729-216-22	TRANSISTOR 2SA1162-G	
Q206	8-729-216-22	TRANSISTOR 2SA1162-G	
Q208	8-729-216-22	TRANSISTOR 2SA1162-G	
Q209	8-729-255-12	TRANSISTOR 2SC2551-O	
Q210	8-729-255-12	TRANSISTOR 2SC2551-O	
Q211	8-729-255-12	TRANSISTOR 2SC2551-O	
Q213	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q299	8-729-120-28	TRANSISTOR 2SC1623-L5L6	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
JR103	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR104	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR106	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR107	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR109	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR110	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR129	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR130	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR131	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR133	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR134	1-216-031-00	METAL GLAZE	180	5%	1/10W	
JR135	1-216-031-00	METAL GLAZE	180	5%	1/10W	
JR136	1-216-031-00	METAL GLAZE	180	5%	1/10W	
JR139	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR171	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR172	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR173	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR174	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR175	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR176	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR185	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR186	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR189	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R101	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R102	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R103	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R104	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R105	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R106	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R108	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R109	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R110	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R111	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R112	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R113	1-249-401-11	CARBON	47	5%	1/4W	F
R114	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R115	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R117	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R118	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R119	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R120	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R121	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R122	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R124	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R125	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R126	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R127	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R128	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R129	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R131	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R132	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R133	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R134	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R135	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R136	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R137	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R138	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R139	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R140	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W	
R141	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R156	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R158	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R159	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R161	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R166	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	
R167	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R168	1-216-103-91	METAL GLAZE	180K	5%	1/10W	
R169	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R170	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R171	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R182	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	
R187	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R188	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R189	1-216-103-91	METAL GLAZE	180K	5%	1/10W	
R190	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R191	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R192	1-216-103-91	METAL GLAZE	180K	5%	1/10W	
R195	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R199	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R200	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R201	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R202	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R203	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R204	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R205	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R206	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R207	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R208	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R209	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R210	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R212	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R213	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R214	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R216	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R217	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R218	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R219	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R220	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R221	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R222	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R223	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R224	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R225	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R226	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R227	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R228	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R229	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R230	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R231	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R232	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R233	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R234	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R235	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R236	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R238	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R239	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R240	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R241	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R242	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R243	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R244	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R245	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R246	1-216-103-91	METAL GLAZE	180K	5%	1/10W	
R247	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R248	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R249	1-216-109-00	METAL GLAZE	330K	5%	1/10W	

B

REF.NO.	PART NO.	DESCRIPTION	REMARK
R250	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
R251	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R252	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
R253	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
R254	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R255	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R256	1-216-107-00	METAL GLAZE 270K 5% 1/10W	
R258	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R259	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R260	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R261	1-216-035-00	METAL GLAZE 270 5% 1/10W	
R263	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R264	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R265	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R266	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R267	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R268	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R270	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R274	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R288	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R293	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R301	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R302	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R307	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R310	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R315	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R316	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R317	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R319	1-216-099-00	METAL GLAZE 120K 5% 1/10W	
R321	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R322	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R323	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R324	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R325	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R326	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R328	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R329	1-216-107-00	METAL GLAZE 270K 5% 1/10W	
R330	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R331	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R332	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R333	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R334	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R335	1-216-099-00	METAL GLAZE 120K 5% 1/10W	
R336	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
R337	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R338	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R339	1-216-099-00	METAL GLAZE 120K 5% 1/10W	
R340	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
R341	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R342	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R343	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R344	1-216-657-11	METAL CHIP 1.8K 0.50% 1/10W	
R345	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R346	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R347	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R348	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R359	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R360	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R361	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R362	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R363	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R364	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R365	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R366	1-216-244-00	METAL GLAZE 82K 5% 1/8W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R367	1-216-244-00	METAL GLAZE 82K 5% 1/8W	
R368	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R369	1-216-248-00	METAL GLAZE 120K 5% 1/8W	
R370	1-216-115-00	METAL GLAZE 560K 5% 1/10W	
R372	1-216-115-00	METAL GLAZE 560K 5% 1/10W	
R373	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R374	1-216-115-00	METAL GLAZE 560K 5% 1/10W	
R375	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
R376	1-216-663-11	METAL CHIP 3.3K 0.50% 1/10W	
R378	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R379	1-216-641-11	METAL CHIP 390 0.50% 1/10W	
R380	1-216-668-11	METAL CHIP 5.1K 0.50% 1/10W	
R381	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R382	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R383	1-216-641-11	METAL CHIP 390 0.50% 1/10W	
R384	1-216-668-11	METAL CHIP 5.1K 0.50% 1/10W	
R385	1-216-117-00	METAL GLAZE 680K 5% 1/10W	
R386	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R387	1-216-641-11	METAL CHIP 390 0.50% 1/10W	
R388	1-216-668-11	METAL CHIP 5.1K 0.50% 1/10W	
R390	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R391	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R392	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R393	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R394	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R395	1-216-115-00	METAL GLAZE 560K 5% 1/10W	
R397	1-249-437-11	CARBON 47K 5% 1/4W	F
R398	1-249-434-11	CARBON 27K 5% 1/4W	F
R1002	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R1003	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R1004	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R1005	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R1006	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R1007	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R1008	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R1009	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R1010	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R1014	1-216-246-91	METAL GLAZE 100K 5% 1/8W	
R1025	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1026	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R1028	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1029	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R1031	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1032	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R1041	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R1042	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R1043	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1044	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R1045	1-216-125-00	METAL GLAZE 1.5M 5% 1/10W	
R1046	1-216-689-11	METAL CHIP 39K 0.50% 1/10W	
R1047	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1048	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1049	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R1051	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R1058	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R1059	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R1060	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R1061	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R1062	1-216-103-91	METAL GLAZE 180K 5% 1/10W	
R1063	1-216-103-91	METAL GLAZE 180K 5% 1/10W	
R1064	1-216-103-91	METAL GLAZE 180K 5% 1/10W	
R1065	1-216-103-91	METAL GLAZE 180K 5% 1/10W	
R1067	1-216-073-00	METAL GLAZE 10K 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1068	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1069	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W	
R1070	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1071	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1072	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R1073	1-216-131-11	METAL GLAZE	2.7M	5%	1/10W	
R1075	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1076	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R1077	1-216-103-91	METAL GLAZE	180K	5%	1/10W	
R1079	1-216-131-11	METAL GLAZE	2.7M	5%	1/10W	
R1080	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1081	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1082	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R1083	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1084	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1086	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1087	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R1200	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R1201	1-218-754-11	METAL CHIP	120K	0.50%	1/10W	
R1202	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1203	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R1207	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1208	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1209	1-216-027-00	METAL GLAZE	120	5%	1/10W	
R1210	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1211	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1212	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1223	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R1225	1-215-899-11	METAL OXIDE	15K	5%	2W	F
R1226	1-215-899-11	METAL OXIDE	15K	5%	2W	F
R1227	1-215-899-11	METAL OXIDE	15K	5%	2W	F
R1228	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1229	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1230	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1231	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1232	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1233	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1234	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1235	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1236	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1237	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R1238	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R1239	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R1271	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1290	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1291	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1294	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1295	1-216-119-00	METAL GLAZE	820K	5%	1/10W	
R1296	1-216-111-00	METAL GLAZE	390K	5%	1/10W	
R1297	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1298	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1299	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1301	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1302	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1303	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1304	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R1305	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R1306	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1307	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1308	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1310	1-216-119-00	METAL GLAZE	820K	5%	1/10W	
R1313	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R1314	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1315	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1320	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1321	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R1322	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1323	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1324	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R1325	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1326	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1327	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R1328	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R1329	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R1330	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1331	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1332	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1333	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1334	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R1335	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1336	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1337	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1338	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1339	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1340	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1341	1-216-111-00	METAL GLAZE	390K	5%	1/10W	
R1342	1-216-694-11	METAL CHIP	62K	0.50%	1/10W	
R1343	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R1344	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1345	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R1346	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R1350	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1351	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1352	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1353	1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R1371	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1372	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1373	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1392	1-216-089-91	METAL GLAZE	47K	5%	1/10W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV103	1-241-759-21	RES, ADJ, CARBON 220	
RV104	1-241-759-21	RES, ADJ, CARBON 220	
RV105	1-241-761-11	RES, ADJ, CARBON 1K	
RV106	1-241-761-11	RES, ADJ, CARBON 1K	
RV107	1-241-761-11	RES, ADJ, CARBON 1K	
RV108	1-241-630-11	RES, ADJ, CARBON 10K	
RV109	1-241-765-11	RES, ADJ, CERMET 22K	
RV110	1-241-630-11	RES, ADJ, CARBON 10K	
RV111	1-241-630-11	RES, ADJ, CARBON 10K	
RV112	1-238-019-11	RES, ADJ, CARBON 47K	
RV113	1-238-019-11	RES, ADJ, CARBON 47K	
RV114	1-238-019-11	RES, ADJ, CARBON 47K	
RV115	1-241-765-11	RES, ADJ, CARBON 22K	
RV118	1-241-765-11	RES, ADJ, CARBON 22K	
RV119	1-241-765-11	RES, ADJ, CARBON 22K	
RV120	1-241-765-11	RES, ADJ, CARBON 22K	
RV121	1-241-765-11	RES, ADJ, CARBON 22K	
RV122	1-241-765-11	RES, ADJ, CARBON 22K	
RV205	1-241-765-11	RES, ADJ, CARBON 22K	

<MODULE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
SEP101	1-808-654-11	MODULE	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<CRYSTAL>	
X101	1-527-722-00	OSCILLATOR, CRYSTAL	
X102	1-577-259-11	VIBRATOR, CRYSTAL	

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	*A-1195-048-A	P BOARD, COMPLETE *****************	
		<CAPACITOR>	
C801	1-126-104-11	ELECT 470MF 20% 35V	
C802	1-162-318-11	CERAMIC 0.001MF 10% 500V	
C803	1-102-228-00	CERAMIC 470PF 10% 500V	
C804	1-123-935-00	ELECT 33MF 20% 160V	
C806	1-124-480-11	ELECT 470MF 20% 25V	
C807	1-102-228-00	CERAMIC 470PF 10% 500V	
C808	1-106-367-00	MYLAR 0.01MF 10% 100V	
C809	1-106-375-12	MYLAR 0.022MF 10% 100V	
C810	1-162-318-11	CERAMIC 0.001MF 10% 500V	
C811	⚠ 1-137-544-91	FILM 0.01MF 3% 600V	
C812	⚠ 1-137-545-91	FILM 0.013MF 3% 600V	
C813	1-106-385-00	MYLAR 0.056MF 5% 200V	
C814	1-106-383-00	MYLAR 0.047MF 10% 100V	
C815	1-124-916-11	ELECT 22MF 20% 50V	
C816	1-124-798-11	ELECT 1MF 20% 160V	
C817	1-130-800-00	FILM 2.2MF 10% 250V	
C818	1-102-228-00	CERAMIC 470PF 10% 500V	
C819	1-162-116-00	CERAMIC 680PF 10% 2KV	
C820	1-162-116-00	CERAMIC 680PF 10% 2KV	
C821	1-162-116-00	CERAMIC 680PF 10% 2KV	
C825	1-123-024-21	ELECT 33MF 160V	
C880	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
		<CONNECTOR>	
CN801	1-564-595-11	PLUG, CONNECTOR 14P	
CN802	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P	
CN803	*1-564-508-11	PLUG, CONNECTOR 5P	
CN805	*1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P	
		<DIODE>	
D801	8-719-302-43	DIODE EL1Z	
D802	8-719-302-43	DIODE EL1Z	
D803	8-719-302-43	DIODE EL1Z	
D804	8-719-979-85	DIODE EGP20G	
D805	8-719-302-43	DIODE EL1Z	
D806	8-719-302-43	DIODE EL1Z	
D807	8-719-105-99	DIODE RD6.2M-B1	
D808	8-719-018-72	THYRISTOR CR02AM-4TB	
D809	8-719-908-03	DIODE GP08D	
D810	8-719-908-03	DIODE GP08D	
D811	8-719-908-03	DIODE GP08D	
D813	8-719-302-43	DIODE EL1Z	
		<COIL>	
L802	1-459-442-00	COIL (WITH CORE)	
L803	1-422-613-11	COIL, AIR CORE	
L804	1-459-109-00	COIL, DUST CORE	
L805	⚠ 1-460-225-11	COIL, HORIZONTAL LINEARITY	
L806	1-414-098-11	MICRO INDUCTOR 10MMH	
L807	1-414-098-11	MICRO INDUCTOR 10MMH	
L810	1-412-529-11	INDUCTOR 22UH	
		<NEON LAMP>	
NL801	1-519-108-99	LAMP, NEON	
		<TRANSISTOR>	
Q801	8-729-195-82	TRANSISTOR 2SC2958-L	
Q802	8-729-201-62	TRANSISTOR 2SC2555-2	
	*4-043-154-01	HOLDER, IC; Q802	
	4-382-854-01	SCREW (M3X8), P, SW (+); Q802	
	4-879-937-00	SHEET, MICA; Q802	
Q803	8-729-906-24	TRANSISTOR 2SD835	
		<RESISTOR>	
R801	1-249-383-11	CARBON 1.5 5% 1/4W	F
R802	1-249-377-11	CARBON 0.47 5% 1/4W	F
R803	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R804	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R805	1-215-892-11	METAL OXIDE 1K 5% 2W	F
R807	1-216-425-11	METAL OXIDE 56 5% 1W	F
R808	1-202-846-00	SOLID 470K 20% 1/2W	
R809	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R810	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R811	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R812	1-249-439-11	CARBON 68K 5% 1/4W	F
R813	1-249-414-11	CARBON 560 5% 1/4W	F
R814	1-249-377-11	CARBON 0.47 5% 1/4W	F
		<VARIABLE RESISTOR>	
RV801	1-223-102-00	RES, ADJ, WIREWOUND 120	
		<TRANSFORMER>	
T801	1-437-082-31	HDT	
T802	⚠ 1-439-526-11	TRANSFORMER ASSY, FLYBACK	

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	*A-1241-140-A	FA BOARD, COMPLETE ******************	
		<CAPACITOR>	
C601	1-136-185-00	FILM 0.22MF 20% 250V	
		<CONNECTOR>	
CN601	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN602	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
CN603	*1-564-507-11	PLUG, CONNECTOR 4P	
		<FUSE>	
F601	⚠ 1-576-230-11	FUSE (H.B.C.) (3.15A/250V)	
	1-533-223-11	CLIP, FUSE; F601	
F602	⚠ 1-576-230-11	FUSE (H.B.C.) (3.15A/250V)	
	1-533-223-11	CLIP, FUSE; F602	
		<RESISTOR>	
R602	⚠ 1-208-290-91	METAL GLAZE 2.2M 5% 1/2W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

<SWITCH>

REF.NO.	PART NO.	DESCRIPTION	REMARK
S601	⚠ 1-692-050-11	SWITCH, PUSH (AC POWER) (1KEY)	

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A-1275-100-A QA BOARD, COMPLETE
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⚠ 1-537-411-12 TERMINAL BOARD, INPUT/OUTPUT & AC INLET

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C401	1-124-234-00	ELECT	22MF	20%	16V	
C402	1-124-234-00	ELECT	22MF	20%	16V	
C404	1-124-234-00	ELECT	22MF	20%	16V	
C405	1-124-234-00	ELECT	22MF	20%	16V	
C406	1-124-234-00	ELECT	22MF	20%	16V	
C407	1-124-234-00	ELECT	22MF	20%	16V	
C408	1-124-463-00	ELECT	0.1MF	20%	50V	
C414	1-126-157-11	ELECT	10MF	20%	16V	
C419	1-126-157-11	ELECT	10MF	20%	16V	
C420	1-126-157-11	ELECT	10MF	20%	16V	
C421	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C422	1-124-464-11	ELECT	0.22MF	20%	50V	
C423	1-126-157-11	ELECT	10MF	20%	16V	
C424	1-126-157-11	ELECT	10MF	20%	16V	
C425	1-108-634-11	MYLAR	0.047MF	10%	100V	
C426	1-128-499-11	ELECT	220MF	20%	16V	
C427	1-128-499-11	ELECT	220MF	20%	16V	
C428	1-124-589-11	ELECT	47MF	20%	16V	
C429	1-124-234-00	ELECT	22MF	20%	16V	
C430	1-163-033-00	CERAMIC CHIP	0.022MF		50V	
C431	1-124-234-00	ELECT	22MF	20%	16V	
C432	1-163-033-00	CERAMIC CHIP	0.022MF		50V	
C433	1-124-234-00	ELECT	22MF	20%	16V	
C434	1-163-033-00	CERAMIC CHIP	0.022MF		50V	
C435	1-124-234-00	ELECT	22MF	20%	16V	
C436	1-163-033-00	CERAMIC CHIP	0.022MF		50V	
C437	1-163-033-00	CERAMIC CHIP	0.022MF		50V	
C438	1-124-234-00	ELECT	22MF	20%	16V	
C439	1-163-033-00	CERAMIC CHIP	0.022MF		50V	
C441	1-124-234-00	ELECT	22MF	20%	16V	
C442	1-163-033-00	CERAMIC CHIP	0.022MF		50V	
C445	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C446	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C447	1-126-301-11	ELECT	1MF	20%	50V	
C449	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C450	1-124-234-00	ELECT	22MF	20%	16V	
C451	1-163-033-00	CERAMIC CHIP	0.022MF		50V	
C452	1-128-499-11	ELECT	220MF	20%	16V	
C453	1-124-234-00	ELECT	22MF	20%	16V	
C454	1-128-499-11	ELECT	220MF	20%	16V	
C460	1-126-301-11	ELECT	1MF	20%	50V	
C461	1-126-301-11	ELECT	1MF	20%	50V	
C462	1-126-301-11	ELECT	1MF	20%	50V	
C466	1-163-031-11	CERAMIC CHIP	0.01MF		50V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN401	1-506-494-11	PIN, CONNECTOR 15P	
CN402	*1-564-518-11	PLUG, CONNECTOR 3P	
CN403	*1-580-690-11	PIN, CONNECTOR (PC BOARD) 2P	
CN404	*1-564-519-11	PLUG, CONNECTOR 4P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D403	8-719-110-09	DIODE RD8.2ESB3	
D404	8-719-404-46	DIODE MA110	
D405	8-719-404-46	DIODE MA110	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC401	8-759-501-21	IC MM1149XF	
IC403	8-759-420-04	IC AN5265	

<COIL>

REF.NO.	PART NO.	DESCRIPTION		REMARK
L402	1-410-682-31	INDUCTOR	470UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q403	8-729-216-22	TRANSISTOR 2SA1162-G	
Q404	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q405	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q408	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q412	8-729-216-22	TRANSISTOR 2SA1162-G	
Q416	8-729-145-18	TRANSISTOR 2SC3736	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
JW2	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R401	1-214-702-00	METAL	75	1%	1/4W	
R402	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R403	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R404	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R405	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R406	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R407	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R408	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R413	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R414	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R415	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R416	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R417	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R418	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R419	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R420	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R421	1-216-027-00	METAL GLAZE	120	5%	1/10W	
R422	1-214-702-00	METAL	75	1%	1/4W	
R423	1-214-702-00	METAL	75	1%	1/4W	
R424	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R425	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R426	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R427	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R428	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R441	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R442	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R443	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R461	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R462	1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R463	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R464	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R465	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R477	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R479	1-216-085-00	METAL GLAZE	33K	5%	1/10W	

QA **CA** **D**

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R480	1-247-711-11	CARBON	680	5%	1/4W	
R481	1-247-720-11	CARBON	3.9K	5%	1/4W	
R482	1-249-455-11	CARBON	4.7	5%	1/4W	
R483	1-249-389-11	CARBON	4.7	5%	1/4W	F
R484	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R485	1-247-688-11	CARBON	10	5%	1/4W	F
R486	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R487	1-249-468-11	CARBON	82K	5%	1/4W	
R490	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R496	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1403	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1405	1-216-295-00	METAL GLAZE	0	5%	1/10W	

<VARIABLE RESISTOR>

RV401 1-230-481-11 RES, VAR, CARBON 20K

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*1-641-720-11 CA BOARD
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⚠1-526-958-42 SOCKET, PITURE TUBE

<CAPACITOR>

C701	1-162-114-00	CERAMIC	0.0047MF	10%	2KV
C702	1-102-050-00	CERAMIC	0.01MF		500V
C710	1-161-830-00	CERAMIC	0.0047MF		500V

<CONNECTOR>

CN701 *1-564-509-11 PLUG, CONNECTOR 6P
CN702 1-508-784-00 PIN, CONNECTOR (5MM PITCH) 1P
CN703 *1-564-508-11 PLUG, CONNECTOR 5P

<COIL>

L701 1-410-668-11 INDUCTOR 27UH

<RESISTOR>

R701	1-202-822-00	SOLID	2.2K	20%	1/2W
R702	1-202-822-00	SOLID	2.2K	20%	1/2W
R703	1-202-822-00	SOLID	2.2K	20%	1/2W
R704	1-202-838-00	SOLID	100K	20%	1/2W
R705	1-202-719-00	SOLID	1M	20%	1/2W
R706	1-202-842-11	SOLID	220K	20%	1/2W

<VARIABLE RESISTOR>

RV701 1-230-164-00 RES, ADJ, METAL GLAZE 55M
*4-376-132-11 COVER (REAR LID), CV VOL; RV701
*4-376-133-11 COVER (MAIN), CV VOL; RV701

`****************************************************************`

*A-1346-202-A D BOARD, COMPLETE
`*****************`

*3-738-015-01 COVER, (DIA. 6) CARBON VR

<CAPACITOR>

C501	1-124-477-11	ELECT	47MF	20%	16V
C502	1-124-907-11	ELECT	10MF	20%	50V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C503	1-126-103-11	ELECT	470MF	20%	16V
C504	1-124-902-00	ELECT	0.47MF	20%	50V
C505	1-106-381-12	MYLAR	0.039MF	10%	100V
C506	1-124-903-11	ELECT	1MF	20%	50V
C507	1-106-367-00	MYLAR	0.01MF	10%	100V
C508	1-124-903-11	ELECT	1MF	20%	50V
C509	1-136-173-00	FILM	0.47MF	5%	50V
C510	1-136-161-00	FILM	0.047MF	5%	50V
C511	1-124-903-11	ELECT	1MF	20%	50V
C512	1-106-375-12	MYLAR	0.022MF	10%	100V
C513	1-106-375-12	MYLAR	0.022MF	10%	100V
C514	1-106-371-00	MYLAR	0.015MF	10%	100V
C515	1-124-925-11	ELECT	2.2MF	20%	50V
C516	1-124-925-11	ELECT	2.2MF	20%	50V
C517	1-130-480-00	FILM	0.0056MF	5%	50V
C518	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C519	1-124-927-11	ELECT	4.7MF	20%	50V
C520	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C521	1-124-907-11	ELECT	10MF	20%	50V
C523	1-106-363-00	MYLAR	0.0068MF	10%	100V
C524	1-102-116-00	CERAMIC	680PF	10%	50V
C525	1-102-820-00	CERAMIC	330PF	5%	50V
C526	1-102-973-00	CERAMIC	100PF	5%	50V
C527	1-124-122-11	ELECT	100MF	20%	50V
C528	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C529	1-124-910-11	ELECT	47MF	20%	50V
C531	1-131-370-00	TANTALUM	6.8MF	10%	16V
C532	1-124-557-11	ELECT	1000MF	20%	25V
C533	1-124-927-11	ELECT	4.7MF	20%	50V
C534	1-124-768-11	ELECT	4.7MF	20%	50V
C535	1-136-161-00	FILM	0.047MF	5%	50V
C536	1-124-927-11	ELECT	4.7MF	20%	50V
C537	1-124-484-11	ELECT	220MF	20%	35V
C538	1-124-910-11	ELECT	47MF	20%	50V
C539	1-136-113-00	FILM	2MF	5%	200V
C541	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C542	1-126-103-11	ELECT	470MF	20%	16V
C545	1-126-101-11	ELECT	100MF	20%	16V
C546	1-124-907-11	ELECT	10MF	20%	50V
C547	1-124-907-11	ELECT	10MF	20%	50V
C548	1-124-907-11	ELECT	10MF	20%	50V
C549	1-124-907-11	ELECT	10MF	20%	50V
C550	1-124-907-11	ELECT	10MF	20%	50V
C551	1-124-927-11	ELECT	4.7MF	20%	50V
C552	1-101-004-00	CERAMIC	0.01MF		50V
C553	1-126-103-11	ELECT	470MF	20%	16V
C563	1-106-383-00	MYLAR	0.047MF	10%	100V
C570	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C571	1-124-913-11	ELECT	470MF	20%	50V
C572	1-101-004-00	CERAMIC	0.01MF		50V
C573	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C574	1-106-351-00	MYLAR	0.0022MF	10%	100V
C575	1-106-351-00	MYLAR	0.0022MF	10%	100V
C831	1-124-907-11	ELECT	10MF	20%	50V
C833	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C834	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C835	1-163-209-00	CERAMIC CHIP	0.0015MF	5%	50V
C836	1-124-907-11	ELECT	10MF	20%	50V
C837	1-163-209-00	CERAMIC CHIP	0.0015MF	5%	50V
C840	1-163-209-00	CERAMIC CHIP	0.0015MF	5%	50V
C841	1-163-209-00	CERAMIC CHIP	0.0015MF	5%	50V
C843	1-124-902-00	ELECT	0.47MF	20%	50V
C844	1-124-902-00	ELECT	0.47MF	20%	50V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
C845	1-124-477-11	ELECT	47MF	20%	25V	
C846	1-124-907-11	ELECT	10MF	20%	50V	
C847	1-124-916-11	ELECT	22MF	20%	50V	
C848	1-131-351-00	TANTALUM	4.7MF	10%	35V	
C849	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V	
		<CONNECTOR>				
CN501	*1-564-506-11	PLUG, CONNECTOR 3P				
CN502	*1-564-011-11	PIN, CONNECTOR 12P				
CN504	*1-564-507-11	PLUG, CONNECTOR 4P				
CN509	*1-564-506-11	PLUG, CONNECTOR 3P				
		<DIODE>				
D501	8-719-404-46	DIODE MA110				
D502	8-719-404-46	DIODE MA110				
D503	8-719-404-46	DIODE MA110				
D504	8-719-404-46	DIODE MA110				
D506	8-719-908-03	DIODE GP08D				
D507	8-719-404-46	DIODE MA110				
D508	8-719-404-46	DIODE MA110				
D509	8-719-404-46	DIODE MA110				
D512	8-719-404-46	DIODE MA110				
D514	8-719-404-46	DIODE MA110				
D831	8-719-404-46	DIODE MA110				
D832	8-719-404-46	DIODE MA110				
D833	8-719-404-46	DIODE MA110				
D834	8-719-404-46	DIODE MA110				
D835	8-719-109-89	DIODE RD5.6ESB2				
D836	8-719-977-69	DIODE DTZ24B				
D848	8-719-800-76	DIODE 1SS226				
		<FUSE>				
F1601⚠	1-532-777-21	FUSE, MICRO (SECONDARY) (1.25A/125V)				
		<IC>				
IC501	8-759-909-70	IC CX23025				
IC502	8-759-100-60	IC UPC1377C				
IC503	8-759-801-98	IC LA7830				
	4-382-854-01	SCREW (M3X8), P, SW (+); IC503				
IC504	8-759-701-79	IC NJM7812FA				
	4-382-854-11	SCREW (M3X10), P, SW (+); IC504				
IC831	8-759-509-29	IC XRU4011BF				
IC832	8-759-509-37	IC XRU4070BF				
		<COIL>				
L501	1-410-093-11	INDUCTOR	33MMH			
L502	1-410-665-31	INDUCTOR	15UH			
L503	1-424-625-11	COIL, CHOKE (PMC)	381.4UH			
L506	1-412-530-31	INDUCTOR	27UH			
		<TRANSISTOR>				
Q501	8-729-901-01	TRANSISTOR DTC144EK				
Q502	8-729-901-01	TRANSISTOR DTC144EK				
Q503	8-729-901-06	TRANSISTOR DTA144EK				
Q504	8-729-901-01	TRANSISTOR DTC144EK				
Q506	8-729-901-01	TRANSISTOR DTC144EK				
Q512	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q513	8-729-216-22	TRANSISTOR 2SA1162-G				
Q514	8-729-216-22	TRANSISTOR 2SA1162-G				
Q515	8-729-313-42	TRANSISTOR 2SD1134-C				
	4-382-854-01	SCREW (M3X8), P, SW (+); Q515				
Q517	8-729-901-01	TRANSISTOR DTC144EK				
Q518	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q519	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q532	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q534	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q569	8-729-907-26	TRANSISTOR IMX1				
Q833	8-729-216-22	TRANSISTOR 2SA1162-G				
Q834	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q835	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q836	8-729-255-12	TRANSISTOR 2SC2551-O				
		<RESISTOR>				
JR501	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR502	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR504	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR505	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR506	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR508	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR509	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR511	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R501	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R502	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R503	1-249-437-11	CARBON	47K	5%	1/4W	F
R504	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R505	1-249-393-11	CARBON	10	5%	1/4W	F
R506	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R507	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R508	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R509	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R510	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	
R511	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R512	1-218-761-11	METAL CHIP	240K	0.50%	1/10W	
R514	1-218-754-11	METAL CHIP	120K	0.50%	1/10W	
R515	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R516	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R517	1-218-762-11	METAL CHIP	270K	0.50%	1/10W	
R518	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R519	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R520	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R521	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R522	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R523	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R524	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R525	1-216-434-11	METAL OXIDE	1.8K	5%	1W	F
R526	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R531	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R535	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R536	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R537	1-215-867-00	METAL OXIDE	470	5%	1W	F
R538	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R539	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R541	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R542	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R545	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R546	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R547	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R548	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R549	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R550	1-216-356-00	METAL OXIDE	3.9	5%	1W	F
R552	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R553	1-216-689-11	METAL GLAZE	39K	5%	1/10W	

- The components identified by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R554	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R555	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R557	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R558	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R559	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R560	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R561	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R562	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R564	1-249-415-11	CARBON	680	5%	1/4W	F
R565	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R566	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R567	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R568	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R569	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R570	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R571	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R572	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R573	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R574	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R575	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R576	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R577	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R591	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R592	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R832	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R833	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R834	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R835	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R836	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R837	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R838	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R839	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R840	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R843	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R844	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R845	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R850	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R851	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W	
R852	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R853	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R854	1-218-754-11	METAL CHIP	120K	0.50%	1/10W	
R855	1-216-697-11	METAL CHIP	82K	0.50%	1/10W	
R856	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R857	1-216-686-11	METAL CHIP	30K	0.50%	1/10W	
R858	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R859	1-216-436-00	METAL OXIDE	3.9K	5%	1W	F
R860	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R861	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R862	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R863	1-249-435-11	CARBON	33K	5%	1/4W	F
R1503	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1507	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1508	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1509	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1510	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1511	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1512	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1513	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R1516	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1519	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R1520	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1690	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1691	1-216-073-00	METAL GLAZE	10K	5%	1/10W	

<VARIBLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV501	1-238-019-11	RES, ADJ, CARBON 47K	
RV502	1-241-765-11	RES, ADJ, CARBON 22K	
RV503	1-241-763-11	RES, ADJ, CERMET 4.7K	
RV504	1-224-250-99	RES, ADJ, METAL GLAZE 2.2K	
RV505	1-241-759-21	RES, ADJ, CARBON 220	
RV507	1-241-628-11	RES, ADJ, CARBON 2.2K	
RV508	1-241-761-11	RES, ADJ, CARBON 1K	
RV509	1-241-768-11	RES, ADJ, CARBON 220K	
RV511	1-241-630-11	RES, ADJ, CARBON 10K	
RV514	1-238-019-11	RES, ADJ, CARBON 47K	
RV515	1-241-768-11	RES, ADJ, CARBON 220K	
⊠RV833⚠	1-228-996-11	RES, ADJ, METAL GLAZE 47K	

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*A-1371-999-A HA BOARD, COMPLETE
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<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN001	1-506-478-11	PIN, CONNECTOR 13P	
CN002	*1-564-007-11	PIN, CONNECTOR 8P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D001	8-719-920-05	DIODE SLP281C-50	
	*4-348-208-00	HOLDER, LED; D001	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
JW001	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JW009	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JW024	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R001	1-247-713-11	CARBON	1K	5%	1/4W	
R002	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R003	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R004	1-216-081-00	METAL GLAZE	22K	5%	1/10W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV001	1-241-846-11	RES, VAR, CARBON 20K	
RV002	1-241-846-11	RES, VAR, CARBON 20K	
RV003	1-241-845-11	RES, VAR, CARBON 20K	
RV004	1-241-845-11	RES, VAR, CARBON 20K	
RV005	1-241-845-11	RES, VAR, CARBON 20K	
RV006	1-241-845-11	RES, VAR, CARBON 20K	
RV007	1-226-773-11	RES, ADJ, METAL GLAZE 22K	
RV008	1-226-773-11	RES, ADJ, METAL GLAZE 22K	
RV009	1-226-773-11	RES, ADJ, METAL GLAZE 22K	
RV010	1-226-773-11	RES, ADJ, METAL GLAZE 22K	
RV011	1-226-773-11	RES, ADJ, METAL GLAZE 22K	
RV012	1-226-773-11	RES, ADJ, METAL GLAZE 22K	

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The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

- The components identified by ⧗ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

⚠.G BOARD (SOPS-1021)

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REF.NO.	PART NO.	DESCRIPTION				REMARK
	4-812-134-11	RIVET NYLON, 3.5ϕ				

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C601	⚠ 1-136-889-11	METALIZED FILM	0.22MF	20%	250V	
C602	⚠ 1-136-889-11	METALIZED FILM	0.22MF	20%	250V	
C603	⚠ 1-161-973-51	CERAMIC	220PF	10%	400V	
C604	⚠ 1-161-973-51	CERAMIC	220PF	10%	400V	
C605	⚠ 1-161-973-51	CERAMIC	220PF	10%	400V	
C608	⚠ 1-161-742-51	CERAMIC	0.0022MF	20%	400V	
C609	⚠ 1-161-742-51	CERAMIC	0.0022MF	20%	400V	
C610	⚠ 1-125-724-11	ELECT	180MF	20%	400V	
C611	⚠ 1-136-206-21	METALIZED FILM	0.033MF	10%	630V	
C612	⚠ 1-124-910-51	ELECT	47MF	20%	50V	
C613	⚠ 1-137-190-91	METALIZED FILM	0.22MF	5%	50V	
C614	⚠ 1-137-190-91	METALIZED FILM	0.22MF	5%	50V	
C615	⚠ 1-130-471-91	PE TEREPHTHALATE	0.001MF	5%	50V	
C651	⚠ 1-161-925-11	CERAMIC	100PF B	10%	500V	
C652	⚠ 1-128-486-51	ELECT	680MF	20%	50V	
C653	⚠ 1-128-485-51	ELECT	220MF	20%	50V	
C654	⚠ 1-130-483-91	PE TEREPHTHALATE	0.01MF	5%	50V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN610	⚠*1-560-436-11	HORIZONTAL PIN ASSY 3P	
CN651	⚠*1-564-518-11	PLUG, CONNECTOR 3P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D201	⚠ 8-719-971-08	DIODE ESAC39M 06C	
D601	⚠ 8-719-510-27	DIODE D3SB60	
D602	⚠ 8-719-921-20	DIODE 1SS119TD	
D603	⚠ 8-719-981-47	DIODE ERA38-06TP1	
D604	⚠ 8-719-981-47	DIODE ERA38-06TP1	
D605	⚠ 8-719-113-44	DIODE RD20ES-T1B3	
D651	⚠ 8-719-971-08	DIODE ESAC39M 06C	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC601	⚠ 1-809-086-12	HIC CH-1018	
IC651	⚠ 8-759-908-15	IC TL431CLP	
PH601	⚠ 8-759-045-81	IC TLP732GR-LF2	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L601	⚠ 1-424-616-11	TRANSFORMER, LINE FILTER	
L602	⚠ 1-424-574-11	L.F.T	
L651	⚠ 1-424-255-41	COIL, CHOKE (MOLDE) 10UH	
L652	⚠ 1-424-615-11	COIL, CHOKE	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q601	⚠ 8-729-322-18	TRANSISTOR 2SK1402A	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R601	⚠ 1-205-940-51	CEMENT	1.5	5%	5W	F
R602	⚠ 1-205-940-51	CEMENT	1.5	5%	5W	F
R603	⚠ 1-215-904-11	METAL OXIDE	100K	5%	2W	F
R604	⚠ 1-215-904-11	METAL OXIDE	100K	5%	2W	F
R605	⚠ 1-212-865-61	FUSIBLE	22	5%	1/4W	F
R606	⚠ 1-247-805-91	CARBON	82	5%	1/4W	
R607	⚠ 1-260-128-91	CARBON	270K	5%	1/2W	
R608	⚠ 1-260-128-91	CARBON	270K	5%	1/2W	
R609	⚠ 1-215-904-51	METAL OXIDE	100K	5%	2W	F
R610	⚠ 1-207-455-11	WIRE	0.22	10%	1/2W	
R611	⚠ 1-247-789-91	CARBON	18	5%	1/4W	
R612	⚠ 1-247-795-91	CARBON	33	5%	1/4W	
R613	⚠ 1-215-904-51	METAL OXIDE	100K	5%	2W	F
R614	⚠ 1-247-815-91	CARBON	220	5%	1/4W	
R651	⚠ 1-215-886-51	METAL OXIDE	100	5%	2W	F
R652	⚠ 1-215-886-51	METAL OXIDE	100	5%	2W	F
R653	⚠ 1-260-107-91	CARBON	4.7K	5%	1/2W	
R654	⚠ 1-260-107-91	CARBON	4.7K	5%	1/2W	
R655	⚠ 1-247-867-91	CARBON	33K	5%	1/4W	
R656	⚠ 1-247-867-91	CARBON	33K	5%	1/4W	
R657	⚠ 1-247-837-91	CARBON	1.8K	5%	1/4W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
⧗RV651	⚠ 1-237-443-11	RES, ADJ, CARBON 1K	

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
T601	⚠ 1-450-760-11	TRANSFORMER, CONVERTER	

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MISCELLANEOUS

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REF.NO.	PART NO.	DESCRIPTION	REMARK
	⚠ 1-413-720-21	SWITCHING REGULATOR	
	⚠ 1-426-043-12	COIL, DEGAUSSING	
	⚠ 1-451-319-22	DEFLECTION YOKE (Y9FXC)	
	1-452-126-11	MAGNET	
	1-544-252-11	SPEAKER	
	⚠ 1-576-232-11	FUSE (H.B.C.) (5.0A/250V)	
	1-941-913-02	CORE ASSY, FERRITE	
V901	⚠ 8-737-651-05	PITURE TUBE (M20JMP10X)	

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ACCESSORIES AND PACKING MATERIALS

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REF.NO.	PART NO.	DESCRIPTION	REMARK
	⚠ 1-590-910-11	CORD SET, POWER (10.0A/250V)	
	2-990-241-02	HOLDER (A), PLUG	
	3-170-078-01	HOLDER (B), PLUG	
	*3-704-301-01	BAG (STANDARD), PROTECTION	
	3-758-123-41	MANUAL, INSTRUCTION	
	*4-034-955-01	CUSHION (UPPER) (ASSY)	
	*4-034-956-01	CUSHION (LOWER) (ASSY)	
	*4-042-974-01	INDIVIDUAL CARTON	
	4-043-155-01	COVER, CONTROL PANEL	
	4-043-156-01	COVER, DROP PROTECTION	